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F I N I S.

THE WHOLE ART OF HVS BANDRY CONTAINED IN FOVRE BOOKES.

Viz.

- I. Of the Farme or Mansion House, Offices and accommodations of Earable gound, Pasture and Medowe.
- II. Of Gardens, Orchards, and Woods.
- III. Of Breeding, Feeding, and Curing of all manner of Cattell.
- IV. Of Poultrie, Fowle, Fish, and Bees, with the whole art (according to these last times) of Breeding and dyeting the Fighting Cock, and the art of Angling;
First written by *Conrade Herobatch*, a learned Nobleman, then translated by *Barnaby Googe* Esquire, and now Renewed, Corrected, enlarged, and adorned with all the experiments and practises of our English Nation, which were wanting in the Former Editions.

By Captaine *Geruase Markham*.

All the new Additions you shall finde to begin with this marke \textcircled{L} and to end with this *.

Gratuum Opus Agricola.

L O N D O N,

Printed by T.C. for *Richard More*, and are to be sold at his Shop in S.
Dunstanes Church-yard in Fleetstreet. 1631.

10 TETRAADOMI

10 TETRAADOMI



TO
THE RIGHT
HONORABLE WILLIAM
Cicell Earle of Exeter, Baron of
Burley, Knight of the noble Order of
the Garter, one of his Maiesties most
Honorable privie Counsaile, and
Lord Lievttenant of the Pro-
vince of Northamton.

SIR.



Y Name, my Birth, my Selfe,
are not wter strangers to your
Honor for the first you support;
the secondyou did love, and the
last you did once write your
Servaunt. I now desire to kisse
your hand in this dedication.

The worke was first gathered by a Noble Counsellor
to the Duke of Cleve, and taught to speake English by
a learned Gentleman Master Googe, who was so
faithfull to the first Author that it became an tter

The Epistle Dedicatory.

stranger to our Climate: and how ever Italy, France, Spaine, Rome, and Naples got from it much perfection, yet our colder Ayre was not capable of the benefites; Which to repaire, I have undertaken in this worke to insert, mixe and reconcile together those Forraine knowledges with our owne practises and experiments, whereby it may be made both to us and to them equally fruitfull. This I desire may kisse your Noble hand, not as bringing you matter hid from your knowledge, but as a witnesse of my Service and an humble suite for safety in your protection. Which granted, I shall ever rest

Your honors humble seruant
Gervase Markham.

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The first Booke of Husbandry,
Entreating of Earable-ground,
Tillage, and Pasture.

Rigo. Come.

Rigo. Master Cono, I am gaine I have
found you in the mids of your
country pleasure. Surely you are a
happie man, thus walking your
selfe of the memorie of the Tyme,
can picke out so quiet a life, and
giving over all, can contente his
self in the pleasant Countrey, far
reaching in the meane tyme to be
toll with the care and busynesse

of the common weale.

Cono. Wherly I shall confess I have taken a quiet
rest of these goodes of the Country would never wante either
happynesse,

Rigo. Tell me I beseeche you, how you keepe your
time, and how you are occupied all the day. For I booke not
but you doe as much as my selfe to spend the time
stably as you may.

Cono. I will tell you, and not bulletinble, if you will
give me the hearing and to breake. I will use the honest and
stricke

S. J. S. T.
171 pages
including
illustrations



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The first Booke of Husbandry:
Entreating of Earable-ground,
Tillage, and Pasture.

Rigo. Come.

Rigo. Come. I am glad I have
found you in the middle of your
country pleasures: surely you are a
happie man, that spylng your
selfe of the humerousnesse of the Court,
can picke out so quiet a life, and
growing over all, can sacrefise the
hid in the pleasant Countries, sac-
rificing as in the meane time to be
told with the cares and busynesse

of the common weale.

Cono. Surely I must confess I have had a happy
time, if these gods of the Earth would suffer me to enjoy such
happinesse.

Rigo. Tell me I beseech you, how you befall your
time, and how you are occupied all the day. For I sould not
but you doe as much as in your frech to spend the time as
stably as you may.

Cono. I will tell you, and not tremble, if you will
give me the hearing: and to begin, I will sicke the woods and
soil.

The first Booke, entreating

verses to the Poet, though in other his writings scarce he-
nelt, yet in this speaking very grave and wise.

Fist serveson knees the Majestie divine,

My servants next and ground I overlooke :

To every man his taske I doe assigne,

Whenthis is done, I get me to my booke.

I use comonly to rise first of all my selfe, specially in
Sommer, when we lose the healthfuller and sweetest time
with sluggishnesse. Aristotle accounteth early rising the best,
both for health, wealth, and study. In the winter il. I be loath
to rise, if either the unseasonablenesse of the weather, or sick-
nesse cause me to kepe my bed, I commit all to my steward,
whose faith and diligence I am sure of, whom I have so well
instructed, that I may safely make him my deputie : I have
also Euricia my maid, so skilfull in hyscrafte, that shre may
well be my wifes suffragan, these twaine we appoint to sup-
ply our places ; but if the weather and time serue, I play the
workemaster my selfe. And though I have a Waylise as
skilfull as may be, yet remembraunce the old saying, that the
best doing so, the field is the Hatteras, and the best pro-
tender so, the hoale the spasters eye, I play the obector my
selfe. That it is holesome to rise early, I am perswaded
both by the counsell of the most gracie Philosophers, and by
mine owne experiance. When my seruants are all set to
woake, and evertie man as busie as may be, I get me into my
closet to secke God, and to reade the holy Scriptures; for this
wyer I always keepe, to appoint my selfe every day my
taske, in reading some part either of the old Testament, or
of the newe; that done, I write or read such things as I think
most needfull, or dispatch what businesse so ever I have in my
house, as with futes abroad. A little before dinner I walke a-
way, if it be faire, either in my garden, or in the fields ; if it
be faire, in my galerie ; when I come in, I find an egge, a
chiche, a piece of hid, or a piece of deale, fish, butter, and such
like, as my soldes, my parde, or my dairie and silphonds will
yield : somwhat a halfe, or such sturts as the garden or the
church doth beare : which viands without any charges my
wife

The best
doung for
ground is
the masters
foote.

of Earable-ground and Tillage.

5

wife provideth me, wherewith I content my selfe as well, as if
I had the daintiest dish in Europe : I never lightly sit abode
one houre at my meate ; after dinner I passe the time with tal-
king with my wife, my servants, or if I have any, with my
ghesto : I rise and walke about my ground, wheres I view my
wo:men, my pastures, my peddowes, my Corne, and my
Cattell. When I am in the Countrie I goe every day, if the
weather be good, and no other great busynesse, about my ground:
is not every day, at the least once in three or thre dayes : as often
as I come to the Cittie from the Countrie, I doe the like, to un-
derstand how my ground is husbanded, and what is done, what
minour : neither do I euer goe about it, but some god commeth
of my travale. In the meane while I behold the wonderfull
wisedome of Nature, and the incomprehensible working of the
most mighty God in his creatures, which, as Cicero truly af-
firmeth, is the delicatest stud of the soule, and the thing that ma-
keth us come nearest unto God. Here waigh I with my selfe,
the benefits and wonderful workes of God, who bringeth forth
grasse for the Cattell, and graine herbe for the use of man, that
he may bring fow out of the earth, according to the psalme.

Academ.
quest.lib 1.

psal. 104:

For what workman is there in the world, that is able to
frame or counterfeit such heavenly workes? Who could of a
fender grasse make Wheat or Bread, and of a tender twigge
bying sooth so notable a liquo: as Wine? but only the mighty
Lord that created all things visible and invisible: With these
lights do I recreate my minde, and give thanks unto God the
Creator and conserver of all things, for his great and exceeding
goodnesse, I sing the song, To thee, O Lord, belongeth praises in
Dion, or, Praise thou the Lord O my soule, &c. beseeching God
to blesse the gifts that he hath given us, through his bounteous
liberallitie, to enrich the fields, and to prosper the Corne and
the Crasse, and that he will crowne the yere with his plen-
tousnesse, that we may enjoy the fruite of the earth with thank-
giving, to the honour of him, and the profit of our neighbours.
Then returning home, I go to writing or reading, or such other
busynesse as I have : but with study, or invention, I never med-
dle in thre hours after I have dinne. I suppe with a small pit-
tance,

The first Booke, entreating

stance, and after supper I either solvone or never write or reade, but rather passe the time sving my shaps come home from the field, and my Oxen dragging home the plow with weary neckes; in beholding the pleasant pastures sweetly smelling about my hause, and my heards of castell lowing hard by mee: sometime I list to rest me under an old yelme, sometime upon the graine grasse: in the meane time passeth by me the pleasant River, the sounes falling from the springs with a comfortable noise; or else walking by the Rivers side, or in my garden, or nearest pastures, I conser with my wife or serbants of husbandry appointing what I will have done: if my Bailiffe habe any thing to say, if any thing be to be bought or sold: for a god husband, as Cato saith, must rather bee a seller than a buyer. Sometimes (specially in winter) after supper, I make my minister to tell something out of the holy Scripture, or else some pleasant stoy, so that it be honest and godly, and such as may edifie. Two or three hours after supper I get me to bed, and commonly as I said before, the last in the house, except my Chamberlaine and my Souldier.

A good
husband
must rather
be a seller
then a
buyer,

R. I. G. O. In the meane time being farr from the Church, neither can you heare the Sermons, nor bee present with your wife and your household at Service: for your owne part, though ye may supply the matter with reading, yet your wife and your serbants cannot so doe.

C. O. N. O. For my part (without daunt be it spoken,) I habe service every day at certayne appointed houres, where preacheth to me daily the Prophets, the Apostles, Basil, Chrysostome, Nazarius, Cyril, Cyprian, Ambrose, Austin, and other excellent preachers, whom I am sure, I heare with greater profit, than if I should heare your Sir John Lacklaines, and foolish fellows in your Church. My wife also being gidden to reading, readeth the Bible, & certayne Psalmes, translated into our owne tongue; if there be anything too hard or backe for her, I make her to understand it: besides, she hath private prayers of her owne that she dieth: in the meane time I habe one, that upon the holidaies (if the weather or our busynesse be such as we cannot goe to Church) neatly the Gospel, teacheth the Catechisme, and mini-

ministereth the sacraments when time requires: but in the sommer time, if the weather be not unreasonable, we goe always upon the hundayes and festiuall dayes to our Parish Church, where we heare our Curate, and receive the blessed Communion: as so; my household, I bring them to this order, that they always serue God before their going to worke, and at their comming to meales. It is written of Anchonic the

The saying
of Saint
Anthony.

Cmte, that being demanded of a certaine Philosopher how he could in the solitatice iu loquacitie without any bokes, occupie himselfe in the studie of Diuinitie: he answered, that the whole world serued him for bokes, as a well furnished Library: in which he alwayes read the wondrefull workmanship of God, which in euery place stand before his eyes. In the like sort haue I my household servants well instructed in the chiese grounds of true Religion, who leaning to their vocation and innocencie of their life, not carried away with the vaine entisements and pleasures of Citties, do behold the Maiestie of God in his workes, and hono; the Creatour in his Creatures, not onely upon hundayes, but every day in the yere, where they may also heare the little birds, and other creatures in their kindes, setting out the glory and Maiestie of God.

R I G O. You seeme to tell me of a Schole of Divinity, & not of a husbandmans cottage: this was the very order of the Patriarkes, and the monasteries in the Primitive Churche.

C O N O. Indede Chrysostome would haue all Christians, Homil. 56.
married folkes and unmaried, to leade their liues according upon the 16
to the rule and order of Monkes: but of such Monkes as lived of Mat. and
in those dayes, not such god-servantes as ours be now: so the places,
profession of a Monke in that age, was no other but the life of
the purest and perfectest Christians, which kinde of life the
olde Patriarkes, as the scriptures doe witnessesse, did leade.

But to retorne to my quietnes, or my Husbandry, from whence I digressed: do you yet maruaile how I can delight my selfe with this so honest and profitable a quietnes, then which in the iudgement of the holiest & wisest men, there is nothing more honest nor better, neither is there besides any trade of life more meet for a Gentleman, nor traualle more acceptable to

The com-
mandation
of Husband-
dry.

Emperours
and Kings,
professors of
Husbandry

Serranus,
Cincinnatus

God; then is the tilling of the ground. The people in the old time (as Cato, a man of great wisdome, and a teacher of husbandry doth witnessse) as oft as they would give a man the name of an honest man, they woulde call him a god husband, comprehending in that name as much commendation, as they could give him: besides, most mightie Kings and Emperors were no whit ashamed to professe this trade, as Xenophon testifieth of King Cyrus: the like writheth Quintus Curtius of Abdoluminus. Numas the King of the Romans bare a singular affection to husbandry, so; that hee thought there was no kind of life so fit to maintaine either peace or warres, or so; the provision of a mans life, being rather a giner of good life, then riches. Moreover, Hiero, Philometor, Attalus, Archilaus, and a great number of Princes more, delighted with the possession of husbandry: this knowledge is also highly commended by Homer, the very fountaine in his time of wisdome, where as he describeth Alcinous the king of the Phaceas, whose delight in the planting and pleasures of his orchardes was wonderfull. And Laertes the old man, that with his continuall occupying of husbandry, brought his mind better to brere the absence of his son. Hesiodus in his wo^me *περὶ γῆς καὶ ἀνθρώπων* giveth great paise to Astres, that being banished the city, gave himselfe to the life of the countrey: yea, the ground hath before time bin tilled by the hands of Emperors, the Earth in the meane time, relishing to be borne with a victors share, and to be plowed with the hands of a triumphant conqueror, either because they dealt with the like regard in their seed, as in their warres, or used such diligence in the come fields, as they did in the campes, or else because all things handled with honest and vertuous fingers prosper the better, being more carefullly looked to. Serranus when he was called to honour, was found sowing of seed. The Dictators office was brought by the purfumers to Cincinnatus, being all naked and besmeared with sweat and dust. The purfumers had first their name of calling Senators and Generals out of the Countrey to the Cittie. In like sort had this name at the first, the Fabij, the Pisons, the Corij, the Lentuli, the Ciceroes, the Plomai, into other eminent houses. Horace de-
leth,

of Earable-ground and Tillage.

7

Ieth, that of husbandmen have bene bred the valiantest and
worstiſt ſouldiers: affirmyng, that the hand that hath biene
biſed to the ſpade, pouerth oſten of greatest value in the field.
Homer reporteth a great valiancie in Ulisses his neat-heard, in
the slaughter of thofe fellowes that wculd haue cauifhed hiſ miſtresses.
Houſt certayne it is, that a great number of Emperours
haue ſprung from the plow. And to let others goe, it is knoune
that the Emperors Galerius & Maximinus came both from poore
headmen to the imperiaſt dignitie. The like is written of Iuſtine,
Constantianus, Probus, & Aurelianuſ. The ſtores report,
that M. Curius the Emperour was found in hiſ house boyling of
a rape roote, when he refuſed the great ſums of gold bought by
the Samnites Embaſſadores. What ſhould I ſpeakē of the anti-
quity of Husbandry. The Antiquity of
cientest of all trades: and to begin with the very beginning of
man, & that neither Osiris, no; Dioniſius, were the firſt founders
of thiſ knowledge, as the Pannimis ſable, but that the moſt
mighty Lord himſelfe did firſt ordaine it: for Adam and hiſ ſons
were all husbandmen, Noe was a planter of vines, Abraham,
Iſaac, & Jacob, were ſhepherds, Saul from hiſ Aſſes, & David from
hiſ ſheep, were called to the croſſe, Elizeus & Amos of ſhepherds
were made prophets. Oziias as we read, profefſed husbandry. Ieſus
the ſon of Syrach commanding husbandry above the reſt, ſaith,
he curſonably biſed himſelfe to hold the plow, to drue the cart,
& to kepe cattle: but what need we moze? Our Saviour Chrift
himſelfe glorieth to be the ſon of a husbandman, & frameth hiſ
parables of planting of vines, of ſheep & ſhepheards: mozeover,
as it is in Luke, our Lord ſchemeth to be a teacher of husbandry,
where he ſheteth, that trees are to be diſped about & dunged,
that they may prospere the better. For ſith thiſ knowledge is of
all other moſt innocent, and without which it is moſt plaine
we are not able to liue: the beſt men haue alwaies imbraced
it, & the old Fathers haue ever counted iſ very Colen-German
to wiſdome. Cicero calleth iſ the Miftis of Justice, diligēce,
& thriſtinesſe, ſome others call iſ the mother and nurse of all other
arts. For whereas we may liue without the oþer, without thiſ
we are not able to ſustain our life: besides, the gaine that
The firſt planter of Vines.
the mother and nurse of all other Arts.

8 The first Booke, entreating

hreof ariseth, is most godly, and least subject to envy, for it hath to deale with the earth, that restoreth with gaine such things as is committed unto her, specially if it be furthered with the blessing of God. The onely gentlemanly way of en-sreasing the hou're, is the trade of husbandry: and so; this cause they were alwayses accounted the perfectest Gentlemen, that,

The wor-
thinesse of
Husbandry.

content with the living their Aunces to z left them, lived in the Country of their Lands, not meddling with figgynge, chopping,

& chainging, nor seeking their living by handicrafts. M. Varro in his time, sayth, there was great complaint made, that the fathers forsaking the Plough and the Sickle, began to crepe into the Towne, and busied themselves rather with Pageants and Midsummer games, then with the Vineyard of the field, whereas the Gouvernours of Rome so devide the yere, as they assigned onely the ninth day for busynesse of the Cittie, & the rest of the time for the tillage of the Countrie, whereby being hardened with laboryng peace, they might the better be able to abide the traualle of warres. Whiche countrie people were alwayses preferred before the people of the Cittie, & more mobility thought to be in them that till the ground abroad, then in those that liuing idly within the walles, spent their tyme under the shadow of the penthouse: except a man will, with the common sorte, thinke it more honest to get his living with the bloud & calamitie of poore soules, or not doting to deale with the sword, to make his gaine of merchandize, and being a creature of the land, contrary to his kinde, give himselfe to the rage of the Seas, & the pleasure of the Windes, wandering like a bird, from shire to shire, & country to countrie; or to follow this godly profession of bawling at a barre, & so; gaine to open his iawes at every bench. Surely, as I said before, this onely hath bene ever counted the innocentest trade of life of all men, and in all ages. By husbandry were made rich the godly Fathers, Abraham, Lot, Iacob, and Ioseph: & most certaine it is, that this profession & this gaine is most acceptable to God, when hee commanded Adam to till the ground, and to get his living with the sweat of his browes. Thus is husbandry of such authority, as God with his open-wit-
nesse hath allowed it, and afterwards by his servant Moses hath

Genes. 3.
Husbandry
pleasing to
God.
Lewc. 26.

ad-

of Earable-ground and Tillage.

9

added his blessing unto it, saying, I will give the ground my blessing in the sixt yare, & it shall bring forth the fruits of thre yeres. And againe, If you will keape my commaundements, I will send you raine in due season, & the earth shall yeld her increase, and your trees shall be loaden with fruit, the threshing time shall last till the vintage, and the vintage shall endure til the sowing time, & you shal eat your bread with plenteouenes. Wher can there be now more pleasant to a Christian man, than to get his living by such meanes as he knoweth doth please God, and to play the philosopher in the most sweet contemplation of the benefits of God, and to acknowledge and reuerence the wi:sdome & powre of the divine Maiestie, and his bounteousnes to mankinde, to give thankes & prayse for his goodness? the very hearbes & creatures in the field in the meane time preach, ing unto vs.

R. I. G. O. You frame me here of a husbandman a Divine, and almost bring me in minde to become a husbandman, who alwaies hitherto with the common sort, accounted his husbandry to be a beastly and boggarly occupation.

C O N C. Wher divinitie there is in it, and what a field of the acknowledged benefits of God, you have heard. That the common sort doe thinke it a beastly and beggerly kinde of life, it is no martiale, sith the common people do never iudge aright. The common people doe wonder at the pompe of the Court, and iudge them so: the happiest men that deckt with gold and purple, are in greatest favour with P:inces, and Officers, and Councillors to them, little knowing in the meane time what heapes of sorrow lies hid vnder that brave & glittering misery. The common sort preferreth shamesfull & beastly delicacie, before honest & vertuous labour, ioyng to consume the night in unkennes, lechery, and villany, & the day in slepe spassime, thinking such happy as neither behold the rising and setting of the sunne. But those that are of sounder iudgement, account the husbandman most happy, if they know their owne felicitie, to whom the Earth in a faire quietter maner doth minister a sufficient living.

R. I. G. O. You have given me satisfaction, good Sir; let me see
the

the fiftie, order, and buildings of your house.

The order
of building
of a house
for the
Country.

CONO. For my part, I build my house, as they say accozing to my purpos, agreeable to my calling, & to my living. I will shew you in order how I have cast it, following the advise of L-comachus in Xenophon, whom Cicero doth greatly commend. And first, the seat of my house hath moued me to build it after this sort. Cato would have a man long in determination to build, but to plant and sow out of hand. Our fathers here before, obserued the same, and seemed to follow the counsell of Cato and Columells, with whom agreeath also Plinic, that the owner build his house in good order, so as neither the house be too great for the land, nor the land too much for the house. And herein it is written, that L. Lucullus, and Qu. Scæuola, were both to blame: so one of them had a greater house then was answerable to his living: the other, which was Scæuola, built a smaller house then his living required, where both are unprofitable to the master: for the great ruinous house, hat only is more chargeable in building, but also asketh greater cost in the maintaining. Again if the house be too little, it will be a destruction & losse of your corne and fruit: therefore it is greatly to purpose, in what sort we build and expande our house. Cato would have the house seated, as the ayre be good about it, and (if it may be) placed at the bottom of a hill, looking directly South, & in a wholesome corner. Varros minde is, to have it placed toward the East, that it may have the shadow in Summer, and the sunne in Winter: with whom Columells agreith, saying, that if ablest letnes, the seate is to be wished in a holesome place (for Cato, as shall hereafter be shewed, would have healthy standing chiesely regarded) with a fruitful mould, some part of it champion, some hilly, lying East or South, well watered and wooded, and standing not farre off from some haben, or navigable river, to the end he may carry and transpot such things as him liketh. Cornelius Tacitus writeth that the Germans were wont to build their houses, as the hill, the River, the Wood, or the Lake, would best suffer them. And heresof sprang at the first so many surnames as are at this day derived from Mountaines, Rivers, Lakes and Woods. Yet others be countaine, in no case to set you

The seat
of corne and fruit:
a house,

your house neare a Spatsh, or a great River: for the Fens and Spatshes, in the heat of the yere, do send forth pestilent and deadly banipes, and a great number of venomous creatures: which dying, for lacke of their olde moisture, infecteth the ayre, and breedeth sundry and strange diseases. Homer affirmeth very truly, that the ayre which in the morning commeth from the River, is very unholosome and dangerous: and therefore if the house must needs be built neare a River, they would have such hiede taken, as the River rather stand on the backside of the house, then before it: and that the fent of the house be turned from the huntfull & unholosome winds, and placed towards the healthiest quarters. Since all waters commonly with dampish vapours in Summer, and stinking cold mists in Winter, except they be well purged with holosome Windes, do infect both man and beast with pestilence: best is it therefore in god & healthy places, to set the house toward the East, or the South, and in suspected aires to place them against the North. From the Sea it is god to be as far as may be, because the winds that blow from the sea, are unholosome, and the space lyng betwixt you and it, yields always a loathsome ayre. You must beware besides, that you set not your house by any great heire way, leake you be molested with passengers, and troubled oftentimes with more guests then you would have.

R. v. o. As far as I remember, old seeliores did measure the goodness of their dwelling, by the qualities of their neighbours.

Neighbourhood.

C o n s. You say very well: indeed I had almost forgotten it; a froward knave to a mans neighbour, is not one of the least mischieves, as shall be sayd in the end of this booke. I have knowne sundry good men, delirious of quietnesse: that hate to forsake good dwellings, rather then they woulde abide the miseries and troubles of such companions; wherefore Hechodus had some reason in saying:

As great a mischiefe is a froward knave,

As is the ioyis neighbour good to have.

But you maywell what I meane by such a long preamble. Surely I am the longer in this matter, because you shold understand the reason of building of my house. For whereas there are

sun-

sundry purposes of building; some build for pleasure, some for wantonnesse, and some for necessity, I thought it good to recite the minds of oþr writers, concerning the building of a house. And when as every one will not suffer such curiositie as they require in placing of a house, some building upon riberes, some without or within marsh wals, who cannot shun the neighbor, hond of the River or the sea; some in lakes, some in wades, and some building upon mountaineis, are driven to supply the defect of nature, with Art and industry: I my selfe, sith I can by no meanes aboyd the neerenesse of the riber, doe seeke as much as in me lyes, to turne away the discommodities: and because I seeke the discommodity of the rising of the flouds, I have set my house in this place without the bankes, and mounted it as high as I could: and lest the rage of the water, and force of the yce should beare it away, I have planted round about it great trees: and that I might shun the damps of the ground, and the blasts of unwholesome winds, I have turned my dores and my windows to the wholesomest quarters.

R I G O. Faurely, either þou or your ancestors haue both comodiously and handomely placed this house; for the front is double, one part looking towards the East, the other towards the South, and so built with Galleries and Gables, as it both receiveth the Sunne in Winter, and the shadow in Sommer: besides, you haue a faire Porch as you enter in, that keepeth awy the winde and the raine from the doore.

C O N O. All the one side, if you marke it, where the front is, lyeth South, receyving from the first corner, the rising of the Sun in Winter, delining somewhat from the West, whereby it is warme in winter, and not troubled with oþer great heate in Sommer: for this kinde of building hath an equall medly of the winter winds and Sommer winds, so that it receiveth the cold winds in Sommer, and is not subject to the bitter blasts in winter.

K I G O. I pray you, procede to describing of the rest. This base court semes to bee after the Italian fashion, with two gates.

C O N O. This Court I thus devised my selfe. Here haþ a kinde

hind of Court before, but not so commodious: therefore I made a square wall here with a great gate, for the bringing in of my carriages, and a lesser for people to pass in and out. In the void place here besides the porch I have made a little walke, covered with a Vyne, with diuers seats in it for shadew, where I many times walke and talke with such sisters as I have: I have in it a table of stone to lay upon when I am disposed. Over against the gate, as you sit at the south side of the Court, there is a Bake-house, and a Coyme-mill, with Ovens for bread, and other baked meates, there is also a Brewhouse, with an Oast for drying of malt to make beere with.

These offices (for want of space) you see, are all sever'd from the house: there is heremanto adioyning a faire Telle, which besides the service here, doth also serve my Hitchin, and other houses of office: so within the house, I have neither Well nor Fountaine, which is a great discommodity, such as I would give a great deal of money to remedie, both for health and colenes in Sommer, and for watering my Gardens and Orchards. Water is one of the principalest things to be cared for, as the greatest cause of health both in man and beast: but this want is supplied partly by a good Well without, and partly by Cisternes, receiving the raine water that falleth in certaine Conduits and Pipes, which water is most wholesome so the body: and besido the River is not far off.

R 1 G O. Come on I pray you, let us see this bake-house, I heare that you have a new fashioned Mill, of your owne devise.

C O N O. You shall see it. When as in a great house, there is great need of Coyme milles, and the common Milles being farre off, the way soule, and I at mine owne indecte to grinde at home, or where I will, thinking to make a Mill here at home, when neither place nor authoritie will let me to build either a water mill, or a wind mill, or a Muerne, or a hand mill, doth but a little gaid: and to build a horse mill were more trouble-some. When I saw the whelle that they use to draw water with, turned with filles or men, I thought in the like sort the whelle of a mill might be turned, and after this sort devised this engin, which a couple of filles, guided by a boy doe easly turne,

The first Booke, entreating

furne, and make very fine meale sufficient for mine owne house, and most times for my neighbours, whom I suffer to grinde toll free. But because it is not the spediest way of grinding, I have beside a horse mill, which if need require, is turned about with a yade or two.

R I G O. Lo, here is a great lead placed handswly in a brick furnace in the corner, which I thinke serueth to brewe withall.

C O N O. Indeed, to that end it is most occupied, but it serueth other turnes besidz.

R I G O. There is a Hopper (me thinketh) over the top of the Dast: where to serueth it?

C O N O. It serueth to convey downe the Dast, after it is wa-tered unto the hairecloth, where it is dyed.

R I G O. Wherefore serueth that great Tunne?

C O N O. To water the Barley in, when neede is, otherwise it serueth for a mash fat. Hereby is a bake-house, and a pastrie with two Dvens, one serving for household bread, the other for manchet for mine owne table, & for tarts and fine bakemeats. Here are also troughs to keape meale in, and troughs to lay leaven in, and there is a faire table to mould upon.

R I G O. All is handsome: but what meanes this building about your Court?

C O N O. These buildings severd from the rest, do serue for guest chambers, with a chamber for my hot house: this side you see lieth against the setting of the Sunne in Sommer, where the Sunne may lie from none till night.

R I G O. But that little Isle moated about, and severd from the court with a bridge, seemeth to be more gorgeously and sumptuously built, I take it to bee your owne lodging, where you, your wife, and your servants, meane to lye safely.

C O N O. It is even so, and therefore it is built upon a higher ground, both for the better ayre and syluer prospect: beside, my Garden and my Orchard are adiouning to it, which with the sweet smell of the flowers, and the faire beautie of the trees, byn- geth both health and pleasure. The windowes, for the most part open all East, and some North, very few West, except from such chambers or galleries Southward, where I dine and sup,

to receive the sunne in winter abundantly, and in summer very little : the Tower that you see serueth for my Idone house.

R I G O. The great sightes of this house must needs fill the Maisters paire, and serue the Kitchin well.

C O N O. Indeed, if as that noble and passing well learned Vero affirmeth, they might be sold, as in some ages they have biene, at eight pound a payre, or that a man might met with such foiles, as Columells witnesseth of, that have given 40. pound for a paire : I graunt I could make a god handsome gaine of them, but as they be, they hardly serue mine alone table.

R I G O. What doth not the mad desire of delicacie procure? even in our dayes of late, I have heard, there was threescore Florens given for a payre.

C O N O. I will keepe you no longer here about mine owne lodging, you have seane a great number of better houses, and peradventure had rather overtake my out-houses.

R I G O. I had so indeed: you have, I see, devided your house into thre parts.

C O N O. So I thought it best; one for my selfe, another for my haftandmen, and the third for graine and fruit.

R I G O. What meaneth this Cell here, so handsomely built at the entrance?

C O N O. This is, sir, my Bailiffes lodging, I lay him by the gate, that he may see who goeth in and out, and what is brought and goeth forth: from thence he may also looke into the Kitchin: and see, & heare what is there done: so beside the meate that is dresseid, there are other things done there in the winter moynings. Over my gate I have laid my Suteward, from whence he may looke into the Court, and to the gate; and ouerst the neighbour the Bailiffe.

R I G O. Harry sir, here is watch and ward indeide this I thinke, you learned of Vero, for it is a part of his order.

C O N O. Whis experiance teacheth. Here by is my storehouse:

R I G O. Precifull God what a sort of toiles have you here?

C O N O. Hefodus would have a husband have all his furni, tree treasy, and will not have him boordow in any case.

Of others borrow not, lest they refuse to lend,
 So thou shalt want, the time shall passe, and busines never end.
 Therefore I have so furnished my Bailiffe, as he hath of every
 sort like. Marcus Varro divideth his husbandry necessaries into
 thre parts: bovells, wher he puttis his owne seruants, and such
 as he hireth: halfe bovells, where his working cattel bee: & mites
 be these that you see, wherof the smaller sort be the e, are, bat-
 chets, and fithes, of all sorts, coyne fithes, grasse fithes, fubble
 fithes, haubils, sickles, knives, prase hakes, spades, shovels,
 wedges, draghakes, great sawes, lesser sawes, hand sawes, tim-
 ber sawes, pitchforkes, iron hakes, iron forkes, cleghills, doun-
 forkes, tonges, sheares, syars, mattoches, files, cleavers, claspers,
 langets, strings, cutting knives, grinding tools, clipping & earees,
 leavers, presses, rulers, garden rakes, doebles, hammers, chip-
 axes, winches, pulleyes, whicles, rakes single & double, yokes,
 berles, collers, houlds, reins, headstals, halters, traces, cords, han-
 mes, Baskets, Fannes, Whippes, Flayles, Sprikles, Spouakes,
 Dauling knives, Hatchs, Galletts, Watels, Whelshake, Whaks
 Riple combs, Hemp betels, Distauers, Spindles, Whartis, Spinning-
 wheeles of both sorts, Firehoules, fire stones, Creditrons
 Handbarrowes, Douny Catts, Whielbarrowe, Maunds, Ham-
 pers, Mopes, and Line, of all sorte.

The sorts and parts of plowes and waines, I will shew
 you when we come into the Count, next the Haybarne: Hog-
 sheds, Barnes, & wissels, for Wine Barre, and Water pipes,
 Cornells, and such like, shall likewise be shewed you, when you
 come to the Winchouse, & Winfeller: with Colerakes, Wides,
 Specers, Bouling-tubs, Boulters, that you shall see in the Back-
 house, and instruments for all other purposes, laid up every one
 in his place, till they be to be occupied: for it is very necessary to
 have of every sort two, as the number of your seruants and ne-
 cessary requires, that if one be lost or broken, you be not driven
 to goe a horroking, or to leave your workes, whereby your men
 shalbe idle, while your toiles be a faching: for to curse every day
 to get new, is not for a husbands profit. We live in the mean time
 your seruants idler, and lose more then the value of their toiles.
 Now I place fift by themselves, such as are most in use, that

of Earable-ground and Tillage.

17

that they may be the nearer, & next to them, such as he occupes
once a moneth, or in a pece: I give the keping of the all by tale,
to my Richard or my baylise, that they may deliver them out as
need is, and lay them up againe, and charge them in any case to
ooke to them every moneth, that they may mend what is amisse
in them.

R 1 G O. Order is a jolly fellow, and no godlier thing in a
man, then to do every thing orderly, and to lay up every thing in
such order, as it may readly be founde of which, a singular exam-
ple doth Homachus Spata in Xenophon, in his Phoenician books,
wherein a wonder it is to see what a deale of ware he had be-
stowed in so small a vessell: he carrieth with him all the furniture
that a man shold need, and every thing in such order placed, as
they were at hand when need was, without any trouble.

C O N O. I my selfe have an inventory of all my husbandry im-
plements, and so hath my Wally and his wife: my steward hath
the key of the stowhouse, and delivres out and receives as I tolde
you, what every man needs: for I willingly neither borow nor
lend: I have a neighbor at thowte of whom sometime I borow,
and lend againe: but except them, to none, as Cato teacheth me.

R 1 G O. The same Cato also, as I remember, teacheth to
know a mans husbandry by his toales, & therfore by your great
number of tales, a man may guesse you have a great deale of
occupying.

C O N O. The double number of them makes the master the
greater: otherwise if there were but to serue the turne, they
would not serue so many.

R 1 G O. I pray you goe forward with your description.

C O N O. You lie a boord come before the Kitchin, which is
an entrie both to the Kitchin, to the ffolkes chamber, and to the
Ice-houses, so that if any misfortune happen to the cattell in
the night, my men may speedily helpe them.

R 1 G O. The Kitchin is very well handled, in that you have The Kitchin
so well parrettid the roote.

C O N O. It is because I have a great number of servants,
which for lacke of other roote, do wine and sup here: besides, the
parrettid or fisking, is a god saftey against fire, yet in Gen-
giano (especially amongst their most ancient buildings) are

The first Booke, entreating

in other neighbour countries that I have sene, they build their
 Hitchins with double costers, one opened and parted square
 from another, or else round and open in the manner of a loover;
 and surely it is excellent both for the avoyding of smoake and
 neigbouring comes from many annopances both of smoake
 and smels which ascend or rise from the Raundges, of which
 Raundges you cannot with conuenientie haue leſſe then two in
 a Hitchin, beſides a convenient boylng place, and these costers
 must be pargetted as wel as the flat ones, the wall being whit-
 ned, it will ſave the expence of many Candells.*

R I G O. Here is a good handſome roſe by the chimmey, well
 ſtored with red Herring, Bacon, Martilmas Beefs, Beets
 Tonges and hogges cheachs; there is also a handſome ſwincke by the
 Hitchin.

Larder.

47

47

Corneloft.

Appleloft.

This lettifed wall that you ſee, ioyneth to my Bay-
 lifles chamber, (g) that he may ſee what is done in the Hitchin,
 with thicke comes, one ſervynge for Butter and Spilke, the other
 for Beere and Wine, the thid to keepe Fleſh in of all kinds,
 powdered and brayndered, and ſolies of all ſorts, with conve-
 nient hooks and Tentors to hange them up from trouble.* Here
 haue I no windowes to the South, nor to the West, but all to the
 North, and to the East, because theſe quarters are leaſt ſubjeſt
 to corruption, and will longe preferue any thing. Above in the
 loft yonder, do I lay my coone, upon a faire floore of ſtone or pla-
 ſter of Paris; for they are the faffeſt from breedynge of vermine or
 ſake, but the floore of earth is utterly unwholesome; and this I
 haue closely ſenced and ſteled againſt Spile, receyving the lighte
 by Lattisſe windowes from the North, ſervynge for my fruit:
 for that quarter is cold, and not moist, whereby it preferues best,
 both meat, Coone, and fruit. Now if you will go through this
 doore, you may behold the back ſide of my house: to heare a
 ſo cloſly ioyned together that neſt a grain can be loſt in any chink,
 or crevacie. Whereupon my coone is ſunday times therþe, fan-
 ned, and minnowed, and many other things done, chiefly in the
 winter.

winter-mornings, though I have beside a threshing place in my barne. On each side are lodgings for my servants, and other rooms and lofts for straw and fodder for my Cattell: and there by the stables, are also servants lodgings on every side, and my Maids chamber nere the kitchin, and the wash-ing house. You see this foystall closed round about, to the end that the cattell, when they be watered and put forth, while their house is made cleane, may be in safty. And here I keepe also Chickes, Duckes, Peacockes, Turke-coches, and other poultry. It is as you see, so enclozed with stables, barnes, and other houses, that nothing can get out. Varro will in any case haue two Courts, an inner court with a little pond in it of standing wa-ter, or running wa-ter, in manner of a fishpond, and there he would haue Horses & Oxen, comming from the field, or stable to be watered and walshed, to serue likewise for Sheare, Swine, & Geese. In the outer Court would hee haue a lake to cast in vehicles, staues, and pieces of timber, so instruments of husbandry, that they might there be seasoned. This Court he would haue often scoured with straine, and chasse, that being trampled with cattell, it may serue to lay upon the ground. You see in this court a double dunghill, one of them neily throne out of the stables, an other old, and serving for the field: for new dung is nothing so good as the old, for manuring of the ground.

R I G O. What meanes these twigges, boles, and straws, cast upon the dung?

C O N O. This preserves the dung, that the ioyce that the ground requires, be not sucked out of the summe: and hither also runs the wa-ter from the Laundry to moist it the better. Varro would haue here also a lodging for servants: But least we carry too long among the dunghills, let us goe see the other buildings about the Court. These great romes that you see, be Barnes to lay Corne in: in some places they use houses, in others againe, stackes, set upon p:ops, which they call mowes: but the houses are a great deale better: Next to the Barnes, are the stables, standing a round court about the court. And because Virgil would have the stable stand toward the South, and Vitruvius, nere the fire, I haue followed their order in building my stables. And I have set here my stable for my cart-horse. I haue another stable

50 The first Booke, entreating

where my stables lodging, for my horses of service, and harcherries.

R 160. That saemeth to be very handomely built.

COUN. Yes questionelle, for I doe not thinke a man can
be too curios in this office, so long as he holde himselfe within
the rule of moderation and wholesomenesse; the walls of the
stable are strong and warme, the windowes of competent spa-
ciousnesse to give sufficient light, and with close shutts on the
inside to darken at pleasure; They are lettised not glasseed, for
glasse is too hot in the winter, and both shalles in the sommer; in
Italy I have seene the windowes made of strong linnen cloth,
supposing the glasse to hold out too much aice, and the lattise to
let too much in; and the cloth by reason of its opennesse when it
is stretched, to be the most indifferent defensore: But so long as
the shutts are made close, pace and diligently observed, this
opinion is but curios.

The rache is made straight and upright, with square stanes
and a strong head; from the bottome of the rache to the man-
ger there goeth a false wall of boards a pretty distance from the
first wall, so that all manner of hayseeds, dust, and other filth
to hattheuer, falleth to the ground betwene the walls, and never
annoyeth either the horse, the mannger, nor any perspicuous
place in the stable.

The mannger is made of a competent height, rather high
than low, with strong posts, round head-trā, and cleane wrought
oaken boards, toynd together so close to the former wall of
boards, that it will carry water, and under it a convenient hol-
lowenesse to hold the litter.

The planchters are of strong well season'd oaken plankes,
and laid rather absolutely in a true level line, than any way
apparantly rising up to the top: so though it be the generall
custome, yet it is to the horse that standeth on the, both dangerous
and unusefull: yet if there be an unapparant and hidden descent
to the grasperie, it is not amisse, the plankes doe not lie so close
but that the byne may passe betwixt them: and for the saffer
keeping of the timber, and better conseruance of the filth, there
is a vault or trench of bricke which runnes all along under the
planchters. In Italy, they use to planchter their stables with
hard board and smooth, for paning stone, and it is long lastings
but

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The modell
of a perfect
stable.

of Earable-ground and Tillage.

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but both too cold and too slippery, and dangerous upon any sudden motion, lying downe, or rising. The Geopetrie is of strong squared oaken quarters, and the ground behind it paved and raised to an even leuell with the planchers, so that when at any time the horse shall goe backward, yet he may stand on a just leuell, and not stand higher before than behind, which is the onely the first boder of diseases in an horses hindreparts.

The rest of the ornaments of the Stable are suitable to these you see; for the Stalles are large so as an horse may turne in them, the partitions strong and smooth; the pillars strong and round, adorneed with rings, hooks, and other profitable things to cattie necessities; seats to sit on, byndges for prodder of all kindes, a faire Cesterne for water, and a strong chaine to crosse the stable dwre so better fastie.

The next are houses for my shepe, and next them for kine, calues, and heifers. There is a hogstie with two rowes, one for my farrowing sows, the other for hogs, & boars. There is also a thritt stie, not farre from the washhouse for the fassing of my dookes: every hinde hath their keepers lying neare them, that they may be at hand what surt chancely. Last of all, there stands my Haybarne which hath in the upper romes my hay, & boneath, waines, carts, cartes, maggins, coaches, barrows, sleds, plowes, roulers, shales, mures, yokes, rakes, plow-beams, heads, skeathers, scelboards, hales, plowset, carts, spindles, & such like, which are there safe from wet, and from pilferers. And all these I leane to the trusse and care of my Baillife, who is a shifull honest man: for as Xenophon saith, ^{The choice of Baillife of husbandry.} the choice of a Bay-

The first Booke, entreating

god Baillife, that is not able himselfe to iudge skilfullly of him: nor let him euer thinke to haue his wozke well done, that knoweth not how, nor which way things ought to be done, but must be faine to leare of his man: for there is none can iudge of a wozke, but a workeman. Therefore in the chioise of a Baillife, I would haue foure things chieflie considered: that he bee louing, diligent, mett to rule, and trusly, and if you will adde a fift, I am well contented, that is, that he be not giuen to drunkenesse: for a drunken man loseth with his memory, the regard of his dutie. I doe not enquire whether he haue bene brought up civilly or daintily, but I would haue him a hard fellow, brought vp from his chilhood to labour, and one that were thoroughly well skilled, of a meane age, that he be not unwilling to worke for youth, nor vnable to trauaile for age. I would haue him haue some skill in carpentry, that if there happen to be any thing broken about his stables, his Catts, or any other instruments, he might spedily mend them, and that he could mend wals and hedges. I would haue him also not unskilfull in the diseases of Cattell: such a one as hath borne charge. For there be a great number, that though they be skilfull enough in their profession, yet haue they not government in them: but either vsing too much sharpenesse, or too much gentlenesse towards such as be vnder them, doe hinder the profit of their master: and therefore I would haue a Baillife well tried before he be taken: neither is it onely to be sought, whether he be skilfull in this craft, but whether he be trusly and louing to his master, without which, he is not worth a tush, though his skill be never so great. And chieflie he must be skilfull in this, to know what wozke is mettell for every man: for some wozkes require strength more than skill, and others, otherwise. And therefore in appointing of these, he ought to haue great iudgement and god discretion, whiche he cannot haue, except he haue good skill. Therefore a Baillife is as well to be taught, as a Smith, or a Carpenter, and the knowledge of husbandry is greater, and of more difficultie: Wherefore I maruaile, that in this is necessary an occupation, there are found so few Maisters and Prentices.

What
things
ought to
be in a
Baillife of
husbandry

*Shall a wif
to her夫
and sonnes*

R I G O.

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R 1 C O O. Of whom would you have your Baillife to be taught.

C O N O. Your question is good, I will shew you, though very few haue taught what belongeth to a husband in all things, neither shall you finde many skilfull in every point. Therefore he that shall be a Baillife, must be taught by degrees, he must first begin when he is a child, with keping of Schape or Swine, and when he is older, with doves of Cattell, and keping of Horsse; he must learme next to digge, to thresh, to set, to sowe, to hedge, to builde, to mend such things as are broken, to play the butcher, to give drynches and medicines to sick Cattell, and such other like things. And thus must he procede from one to another.

R 1 C O O. You shew me wonderfull philosophie.

C O N O. As I said at the first, his best age is betwixt thirtie and threescore: for the flames of lusty youth beginning to abate, he will not be so hot in his wroking: for whiles he folowes that game he will haue no minde but of his minion, neither shall any reward be so welcome unto him, as the fruit of his fauours, nor any griefe so great to him, as the failing of his desire. If he once passe threescore, he waxeth slothfull and vnable to laboure: for I had rather haue the wroake of a painefull and diligent Baillife, then the service of a great number of slothfull idlettes: as he that had rather haue a Lion captaine over Harts, then a Hare captaine over Lions. This must chiefly be looked unto (since early going to wroke is a great matter) that the Baillife be a god riser, and that, supplying his Spakkers place, he may be firs^t up in the morning, and the last that goeth to bed, and that he see the dores fast locked, and every manribbed, that the cattell haue meat enough, and be well littured, that he set forward, according to the tyme of the yere, such as do loyter in their laboure, that he him selfe go lustily before, that he suffer no man, after it is day, to lag behynd, but that they follow the Baillife lustily with a courage, as if he were their captaine in a skirmish: and that he vsenly deniseth to cheare them vp in their laboure, sometime to helpe hem that fainteth, to take his tole out of his hand, & laboure lustily before hem. And as a carefull shepheard, early carrying out his Schape, & bringind em^e home late, looketh that he leade none of his flocke behynd hym, so likewise ought a god Baillife to carry out his men, & to haue

god regard over them. If any of them be hant or siche, let him
 bosome to the wynging of them, and if they be very sick, to carry
 them to the siche folkes lodging, & to see that they be well oþde-
 red: and to that we have a built yonder house that you se remo-
 bed from the other buildings, that the siche may be had thither
 cloked unto, specially if their diseas es be contagious, least other
 shoulde infested. It is the Maistres duty to have such regard
 of the health of his seruants, that their sickenes may be preuen-
 ted by god medicines & god looking too: as to see that their meat
 and drinke be wholesome & god, and given in due season: beside,
 that the Wayliffe eat his meat with them, and not by himselfe,
 whereby it shall be the better ordered. And because phisitians
 are not alwayes at hand in the country, it behoveth to use such re-
 medies, as experiance hath taught, & such as haue holpen others
 of like diseases. Those that labour in the Sunne (because the
 Sunne hurteth the body & heines) their diet must be the thinner,
 that they make not too great meales, but eate little & often: this
 order keepeth them in health, & helpeth digestion. Some do use
 to gine Wormewood-Wine, or porrage made of Wormewood,
 It is very necessary for them sometimes to recreate themselves,
 so that in the meane while they gine not themselves to naughti-
 ness. There must be heed taken, that they drinke not when they
 be hot, nor lye upon the cold ground: if their water be not god,
 it must be well purifed. It is very god also to let them drinke
 barley water. We must remember, that seruants be men: be-
 sides, such god looking to, will haue a greater god will & duty,
 and lightly they will serue the faufuler and better when they
 haue their health, which haue had god cherishing in their sick-
 nesse: and besides (which is not well obserued in greater gover-
 nors) the Wayliffe must beware that he deale not too cruelly, nor
 to gently with them, that he alwayes make much of those that
 be diligent & painefull, that he be not too hastie with the worse
 sort, that they may rather reverence him for his severity, then
 hate him for his cruelty, which he shall easely bring to passe, if
 he rather beware that they offendant, then after their offence,
 to late, to punish them: for there is now so god a hand for an
 euill iudged person, as to let him alwayes be occupied. So that
Catoes saying herein is most true, that men in doing nothing,
leaving

leavens to doe evill. Let them haue their allowance , and their meat in due season, let them alwayes sied together in one place, and the Baillife with them, that he may be an example to them of all christines. If he finde any of them to haue laboured painefullly and truly, let him gine them a god countenance , and encourage them with rewards, to make them the willinger to do their duty : beside , let him looke that they bee rather well clothed , than curiously apparelled, that their garmentes may keepe them from the colde and the raine: let their wages be well paid them , that the want thereof be no excuse for them to loptier in their laboures. And as meat and apparell is necessary for them, so likewise is correction. For the wise man saith, give a Woyle the whip, an Asse the snaffle, and a Fools the rod. And againe , he that dealeth too gently with his seruants , shall make them in the end stubborne and stroward. Above al things let him see that they feare God, let him in no wise suffer them to sweate , or to blasphem, nor to use filthy or ungodly speach: but let him prohibe that they be instructed in the Catechisme , that they use prayer , that they goe to Sermons upon the holy dayes , and receiue the sacraments at times appointed, that they be not hummers of Alehousees or quill company. For, as the Poet saith, it is lawfull to be well occupied , even on the Festinall daies. When they haue serued God , and dined, let them walke abroad in the ground , let them looke there be no Cattell in the Coone , and stop such gaps as they finde open, and looke that their Cattell be in safetie abroad. To be short, the Baillife must in all these matters be , as it were a Bishop , or a Master of the woorkes , so shall every man the better doe the woroke that belongeth unto him. The Baillife must never be from their hailes , least in his absence they fall to lopticing , neither must he suffer them at any tyme to be idle : he himselfe must not be given to drinking or gaming, nor to hunting or fishing , except for his masters profit : let him very seloome entertaine any guests , except they be of his masters retinue: let him not be stow his masters money about his owne merchandise , for such kinde of bargaining makes him the flacher in his busynesse and loseth his accounts let alone fall out iust. Above all things this is to be wished in the Baillife , that he doe not thinke himselfe wiser

wiser then his master, or suppose himselfe to haue more skill then he hath, & that he alwaies seeke to learne such things as he is ignorant of. For as it is very profitable to do any thing skilfully, so is it more hurtful to do it untruly. Columella had rather have a Bailiffe that could neither read nor wryte, so that his memory be good: for such a Bailiffe (saith he) will oftner bring his Maister money, then a booke: because (not able to wryte) he cannot so easily frame a false account. The Bailiffes wife must alwaies be with him, that she may keepe him from running at rovers, & may helpe him in his labours: her age must be such also, as we required in the Bailiffe before; she must be painfull, healthy, careful, & honest. She must not be too ill favoured, lest she be loathsome unto him, nor too beautifull, lest he boote too much upon her, & keepe home when he shoulde be abroad. She must in the meane time looke to the ditchin, & to other works at home, governe the Maides, & keepe them at their worke, looke to their necessaries, and gise them their allowance.

R I G O. You comme to me here, to make the Bailiffe a Master, and the Maister a Bailiffe.

C O N O. This age of ours, quite corrupted with delicacy and daintines, little regardeth the honest and profitable orders of our foreshathers: for in those daies the Maisters themselves plaid the husbands, and thought it not to go well with that Maister that must be taught by his Bailiffe, as Cato witnesseth, and Varro also complaineth, that the husbands in his daies had forsaken the plow & the sickle, gotten themselves within the walls, & spent their time rather in maigames & midsummerights, then with tilling the ground, or planting of vines. Therefore Cato & the old writers, do attribute many things to the Maister, that we assigne to the Bailiffe. And I, though I comande to put the charge of the household in the hands of my Bailiffe, yet will I my selfe be ouerseer, and haue every thing done as I appoint, entreating gently (as I taught the Bailiffe aforesayd) both the Bailiffe & my labourers, regarding more their labours then my gaines. Here you sit the comand for my husbandmen, severed from mine own house, but yet so, as I may easly see what they do. Here I and my wife, with our household seruants lie. If it please you, I will carry you abroad and shew you my ground. You must not looke to see the great
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countries of Metellus, or Lucullus, but the possessions of a poor country man, that contented with his state would be as he is, & would not change lives with the Emperour.

R I G O. I pray you let me heare your opinion of the field & Of the till
the tillure thereof : for I see you are a perfect husband, and no- ing and
thing vnskillfull. I have a great desire to heare some rules, and husband-
such as serue our turne best. ding of the
ground.

C O N O. If it be a shame for an apprentice at the Law, and a pleader of causes, to be ignorant of the law wherein he dealeth; a greatest shame is it for a professor of husbandry, to be vnskillfull in the ground whereon his whole trade lyeth. How is he able to iudge uprightly in husbandry, that knowes not which way to till his land? The professors of all other arts, do commonly keep to themselves, such things as be the chiese mysteries of their knowledge. Contrariwise, the husbandman rejoyceth to haue every body made priuie to his skill, and being demaunded in what soyt he doth this and that, he gladly declareth his whole dealing in every point: such godnatured men doth this knowledge make. I have ordered my ground here, according to the diligence of the old Fathers, rather then for the wanternes of these times. Therefore I will first shew you their opinions, and afterwards mine owne lancies. First, Cato appointed nine degrees of the land in Italy. The first, the Vineyard, that yieldeth much and good wine: the next, the well watered Garden: the third, the Willow Grove: the fourth, the Olive trees: the fift, for Meadow: the sixt, Corne ground: the seauenth, for Copie ground: the eighth, for Timber trees: the last for Past, But these degrees, as Verrro sayth, are not generally allowed of, neither haue we the use of them all in these countries: but make most account of such land, as serueth for Garden or Orchard ground, Corne, or Fishponds. Of Corne ground I will first entreat, and afterwards of Pasture, Meadow, Willow land, and Willow Groves.

R I G O. I pray you then take the paines to shew the nature of it, and which way the best ground may be knowne.

C O N O. Cato counteth that the best ground, that lieth at the fote of a mountaine, being levell, and lying toward the Sunne, as the whole countrie of Italie lieth. In cold and Northly countries,

Of Corne
ground.

countries, it is good to haue the land lying East and South, least these two quarters, being backe off by any hill, the land be frozen with colde: but in hot countries it is better to haue the ground lyne North, both for pleasure and health.

K I G O. They say it is needfull to know the conditions of every ground.

How to
know
the good
nesse of the
ground.

C O N O. It is so, and sooner shall you do it, than the conditions of a man: so; being welltilled, it will not deceiue you, but deale justly with you. To knowe the nature of every ground, Iscomacius in Xenophon, doth will you to marke well the plants and the yield of the Countrie, except you will loose your labour, or fight with God. Varrone counsels you to looke whether there be in the land either Stone, Marble, Sand, Granell, Raddell, Chalk, Clay, Preble, or Carbuncle, that is, ground over-heated and parched with the sunne, which wil burne the rootes of what soever commeth in it. Also if it be wet or weeping ground, or subject unto other inconueniences, & such ground also, according to the nature of the soile, is god or evill. In some Countries stony ground is altogether barren, specially for Corne and Fruite: In other places againe, they use stones in the manuring and besetting of their land, as in certaine places of Arden is to be seene. And also in sundry parts of England as in some parts of Hartforsshire, Bedforshire, and many others, where the stones are so innumerable that they cover the ground and the mould is not to be seene; yet their growtheth by industrie as god and as strong wheat as in any other part, and no other reason to be yeilded, but the benefit of the stones which are to the ground as god as a meaneuse, for it is to be understandid, that these stony earthes have in them a naturall Barrennesse and Lightnesse, so that wheres the stones are removed, theris every shower of rayne washeth away the mould from the root and leaueth it to the violence both of the sunne, the frost, frostynges and Tempests, where as the stones covering the grayne kepes it warme and defendes it from all these iniurys: and herein you are to obserue that these stones are but small and of no great poore or wayght, but so as the grayne when it sprouteth can beare them up by reason of their losenesse & want of sufficient mould to hynd them. Theophrastus wittely, that the Corinthians did cast away all the stones

out

of Earable-ground and Tillage. 39

out of the fields of Saragossa, and there by make the ground the worse, when the stones being away, and the country hot, there is no succour left to defend the ground from the extreme heat of the sunne. In other places in stony and hilly ground, trees do prosper well. In like sort also, in all Countries we must regard the layre of the Countrey, and the nature of the seed that we sowe; for Gravell in some places, is cast upon the ground in stead of dung, & som things prosper best in gravelly grounds. In Barbary (as Columella doth witness) the very rotten lands exceed any other ground in fruitfulness. It is also something to the purpose whether the gravel be white, red, or yellow: besides, some ground doth deceiue both with colour and quality. In some Countries the black mould is only esteemed: in others, the fatted mould is thought best. In England, the chalybe ground beareth good coine, and pastures very well. In some places the thicke and the clamy ground is most fruitfull. In all these it is to be learned, what is best for the hilly ground, what for the bally, what for the tilled, what for the lay ground, what the moore flegie ground requires, and what the dry and barren. Also in planting, what ground is best for Wines, what for other trees, what delights in dry ground, what in moist ground. Virgil commandeth a meadow ground that is fat, and will soon be resolved, for such ground is tilled with small charge and labour: the next, that which is fat, & stiffe, which greatly recompenceth the husbandman his trauaille and charges: the next is, that which is dry, leame, and stiffe: for both it is tilled with great labour, and beside neither auerreth in his crop the husbandmans trauaille, neither garneth it for good meadow or pasture any time after, and therefore such ground is not to be measured withall. Also, the goodness of the ground is easily perceived by perfect tokens: for a cloe sprinkled with a little water, if in working with the hand it be clammy, and cleaving, & sticketh to the fingers like pitch, when it is handled, as the Poet saith, and breaketh not in falling to the ground; as also if you dry it either in the sunne or against the fire, if after it is dried it willingly falleth to dust, this sheweth a natural fatness, and richness to the earth: besides, you may know the mould that is good for Coene, if it bear: Uniroches, Thistles, White-leaved grasse, Dandys, Brambles, Bleachethorne, and such like,

Signes of
the goodness
of the
ground.

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like, as never grow but in god ground: as on the other side, lofisome and ill laboured wenes, declare a leane and a bitter ground: Fern, and withered plants, a cold ground sad and heauy coloured, a moist and a wet ground: a rabbet & a stony ground, is discerned by the eye. Also it is most probable that all Clays whatsoeuer either simple or compounded which are laden with Glasse, Bone, Whynnes, Ling, Heath & their like, and all manner of hands simple or compounded which naturally bring forth Moly Glasse, Fern, Heath, Witch, wilde Myrtle, or any Marish and stinking grasse, that these are most barren. A stiffe and a tough clay, by the labour and toile of the Oxen. A god token is it also of god ground, where the Crows and Pies follow in great number the plowman. The godnes is likewise knownen, if at the sun setting, after a Rainebow, and in a shoure of raine, following a great drought, it yeldeth a pleasant savour: also in taste it will appare: if taking a cloo that hath ben watered in an earthen vessell, you finde it sweet, it is a signe of rich ground, if bitter, a great token of barren ground, if it be saltish, it is to be shunned, and not to be used upon the boundhill. You must remember also, that ground will sometimes change, and of fruitfull become barren, which hath bene sene, as Plinie reporteth, in the old time in Iusticie, and in our time, in sundry places of our Countrey. Beside, one kind of ground, though it be neuer so fertill, will not braxe all things, as the Post wrytly noteth, Ne serues one ground for every crop. Whereover, the disposition of the Heauens is a great matter, all Countries have not the weather and ayre alike: wherefore it is the part of a god husband to know the nature & propertie of his ground, and to marke the disposition of it for every part of the peare: he must also consider what crop is best for every layer. Some ground serveth for Coyne, some for Wines, some for Olives, some for Spedew, some for Pasture, neither may all things well be sownen in rich ground, nor nothing in barren ground. Such things as need not much moisture, are best sownen in light ground, as the great Calver, Soperie, Chich, and the other pulses that are pulled and not cut. Those that require more sustinance, are sowne in richer ground, as Pot herbes, Wheat, Barley,

Ground
will
change.

The dispo-
sition of
the heauens
to be obser-
ved.

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Barly, Linseed, Some of them to be sown to the ground the yere following, as Lupines that are sown to be sown for the bettering of the ground. There is difference also to be put betwixt fruits for pleasure, & such as be for profit: as fruit trees & flowers, and such things as yield both pleasure and sustenance, & are also profitable to the ground. You must choose for Willows, Elmes, and Nudes, a wet and a marshy ground, & contrary where you will have Cane & Bulis, that delights in dry ground: Pepperage and such like, must be sown in shadowy places, and other ground for Dutchsets, Timber, Spaff, and fiewell: yea, such ground as is very gravelly and barren, hath his use, where you may plant Birch, and such like, and watry grounds where you may set Alders, Browne, and Bulrushes.

R I G O. Surely the temperature of the ayre, doth much in the fruitfulness of the ground, so I have oftentimes marked, that one kind of ground is more fruitfull in one Country then in another.

C O N O. In Venefri, the gravell ground beates Olives best, where as about Granado, they require the richest ground that may be. When in other places the Wine doth not prosper very well in stony grounds, about the Rhine the very ragged roches do yield as fruitfull wines as may be seen. Plinie doth witness, that in some places the Wines do grow even in the fennes and marshes, such a secret force is there in nature. About Chalcis, an Island about the Nones, it is said there is a piece of ground so fruitfull, that they mow their barley being sowne in his season, & their Crop, sow it again, and gather it with their other graine. The Albanoises receive the fruit of their land ~~as agra et dimissa~~, untillied and unsoen, and being once sowne, it yieldeth his crop thre yeres together. Homer calleth Phrigia ~~as agra et dimissa~~, and Argos ~~as agra et dimissa~~. Hedorotus writeth, that Babilon is so fruitfull, as the ground yieldeth increase two hundred and thre hundred fold. Plinie affirmeth, the increase in his time to be fifty & to good husband an hundred fold. About Monte Gibello, it is reported by credible persons, to be an hundred fold. Italy is so full, that Varro calleth it the garden of the world, because it is so fertile & wel planted in every place. Campania, being ful of course: Apulia, plentious with wine: & Venefri, abounding with Wine.

R I G O.

R I G O. I have heard say that Germany & France have not beene in times past very fertill, that they have bene altogether without fruitnes, and now we see no country more fructifull than yelbeth greater abundance of all things. What can you finde better wines, then about Bauer and the Rhine? I speake not of their great Ries of graine, spines of gold, silver, iron, and lead. In the country of Tharin in Germany, it is said, that after wheat once sownen, the ground will yield this of it selfe two yeres together.

CONO. Yes, and in our Countie here, we have ground that will beare Wheat every yere. Wape has being once sownen with us, both oftentimes yeld his Crop two yeres together, without sowing or labouring.

R I G O. Under the Northern Pole, it is reported, the ground is so fertill, as they sowe in the Morning, & reape at Noone. In Barbary, where the ground is low, they plant under the Date tree the Olive, under the Olive the Figge tree, under the Figge the Pomegranate, under it the Wine, under the Wine they sowe Wheat, and under Wheat Pease, all prospering one under the other Spanish, and yielding their fruit the same yere.

CONO. That made me to say, that the ground followes the disposition of the heavens.

R I G O. But sith in all places the ground is not of like goodness, what if we chance upon a leane and a barren ground, as heathly, bushy, and gravelly ground: may these be made fruitfull, and increased by Art?

CONO. Verily well; there is no country that the most gracious Lord hath left without sufficient yeld, if labour and travail be not refusid.

R I G O. That shall I would gladly understand.

CONO. It is brought to passe divers wayes, as by ploweing, hachinge, harrowing, clotting, burning of Way, watering, stoning, mattheing, sanding, lynsing, waynsing and watering, principally by drounging and diligent labour: and to this end settte those heapes of droung that I lately shewed you.

R I G O. I pray you let me know what droung doth most enrich the ground.

CONO. Vero and Columell his follower, say that the sorts

The fruitfulnesse of Germany.

The fruits fulnesse of Barbary.

²⁷
Of dunging of ground.

The sorts of dung.

of youngs: the first of Poultry, the next of Oxe, the third of Cattell. Of the fift soxt the best is that which is had out of Dene-houses, the next is of Pollins, and all other colts, except Gales and Dukes, which is hurtfull. The people in the old age had such sorte of Poultry and Fowle, as the young of them suffiseth for the manuring of their ground. The next to this, is mams or-duce, if it be mixed with other rubbish of the house; for of it selfe it is too hot, and burnes the ground. Spans wine, being like Vyne moneths kept, and poured upon the rotes of Apple trees and Vines, bringeth great fruitfullnesse to the tree, and giveth a pleasant taste to the fruit. In the third place is the dung of Cattell, whereof the best is th: young of Asses, because this beast doth chaw with most leasure, whereby his meat being well digested, is made the profitabler dung. Next to this, is the dung of Sheape, next of Goates, then of Oxe, and Horses: the worst of all of Swine, very hurtfull to Coyme, but used in some places for Gardens, for lacke of other dung, but is a great hinder of nosome weeds: yet Plinic setteth to alioyn it as the filth of a filthie creature. The young of Horses likewise, where the Horses are fed with Barley, doth breed great sorte of weeds. The Lupine, before he beare his coo, is most commenrebed, being turned up with the plowm or Mattocke, and layed in bushels about the rotes of tries or Vines. Wher they have no sortes of Cattell, they use to mend their ground with straw and ffreine, and with the stalkes of Lupines, and the banches layed together: in some Ditch: heresunto you may cast Ashes, the filth of finkes, and priuies, and straw, with dust and other things broken together: but in the midde, you must lay some sound matte against the breeding of Rodes and Snakes: also Hemichches, Wallowes, and the like, growing about vntillie Cress and ffreine, with other such rotten weedes, you may gather and lay under your Sheape: They that dwel in Chavelly and Heathy groundes, doe take the Turves of the Earth and the Heath, and laying them in heapes powdered with a little dung, suffer them to lie and rot, and after lay it upon barren ground, but specially where they kepe great sorte of Sheape, they cast into their foldes such Turves pac'd from the ground. Columella counts them but evill husbands, that have of every one of the lesser kindes of Cattell,

Old dung
best for
Corne,
and new
doung for
Meldow.

lesse then a Cartload of young in 300. dayes, and each of the greater soxten load, beside the filth and durt of the yard. This is also to be noted, that the dung that hath lien a yare, is best for Corne, so; it both is of sufficient strength, and breedeth lesse iuedes; but upon Meadow and Pasturs, you must lay the newest, because it bynges most grasse, & this must be done in Februarie, the Son encreasing, for this is the best time to cause increase of grasse. In the manuring of your ground, looke that you lay most doung upon the top of the Hill, for the caine will bear it to the lower parts fast enough. See that mindes to have his ground heare Corne, if hee meane to sowe in the end of Summer, must turne in his doung in September: if in the Spring, he may lay it on at any time all the winter. What time soever it be done, you must looke that the winde be Westerly, and the moone in the wayne. This observation helpeth greatly to the bettering of the ground. Besidz, you must not forget to let the doung be dyze before it bee layd upon the ground. So though Columella do bid the contrary, our owne experiance wils us not to follow him: for doung while it is moist, doth more harme to the ground then god, as daily experiance teacheth.

Now as your land will ware cold, if it be not dounged, so will it be dried or burnt, if it be manured yearly, or too much. The watry ground requireth more store of young dry ground the lesse. 15

But besides all these manurings, there is another not inferiour, but surpassing any formerly spoken of, especially upon extreme barren shands, and cold claves, and that is Lime, a thing of that warmth and comfort, and so well seasoning and giuing saltnesse to the fresh earth, that it is accounted amongst husbandmen the mother of all scutfulnesse. As lime, so old woollen ragges of all kinds chopt small with an hatchet, and thowne on the land is an excellent manure: so is also the shamings of hornes, and the houes of all sorts of Cattell whatsoener, being likewise helved and cut into many paces; and lastly, Hempe-weede of the sea which groweth at the bottome of the Rockes, whereon the sledge of the sea beateth, the vertue thereof is wonderfull upon barren grounds.

R 1 60. I remember, I have yet this scene Earth taken out of the fields neare adiourning, and layd upon the land, I therefore guesse

The ob-
seruing of
the Winde
and the
Moone, in
mending
of the
ground.

Wet doung
hurts the
field,

guess the earth may be mended with earth.

C O N O. The Germans, besides sundry other sorts of enriching of their groundes, doe instead of boong, cast upon it a kind of pitch and satynesse of the earth: (Plinie counts it to be first devised in England and France) called Marke, as it were the fat kind of the earth: but I rather thinke it to be the inuention of the Germanes, with whom yet both the name and the use is retayned: it is gotten in the deepe pits, but not alike in all soyles. That this day in part of France that lies upon the Maale, doth shew a sandy kind of Marke differing from the fat Marke of Germanie, but of the same quality: which, carried upon the sea in vessels, is solde as a great merchandize. In some places the scowring of Ponds and Ditches, is used, to the great enriching of the ground, in the mountaine and barren groundes. In some Countries they make their land very fruitfull with laying on of Chalke, as Plinie testifieth of the Burgundians, and the Gascoynes, and in Germanie in our dayes, this manner of mending of ground is common. But long use of it, in the end bringes the ground to be starkenoughe, whereby the common people have a spitch, that ground enriched with Chalke, makes a rich fatter, and a beggerly sonne. Yet this is meant by the barren clay ground, not the barren sand, especially a mossie, spewyng, and hungry sand: soz it is true that chalke eateth, fretteth, and feedeth upon the fruitfulness it hath begot, when it wanteth grosser matter to gnaw upon; but this sand soile is never empty, and chalke, so delighteth therin, that it converts the evill thereof into goodness. A little lower, not farre from the Maale, in the Countrey of Lyeg, they mend their land with a kinde of slate stone, which cast upon the ground doth moulder away, and makes the ground fatter. In Lombardie they like so wel the use of ashes, as they esteem it farre above any boong, thinking boong not meet with ashes to be used for the unholisontenesse therof. Columella writeth, that his Uncle was wont to mend sandie and gravelly groundes with Chalke, & chalkie and hard groundes with gravelle sand, whereby hee had alwayes goodly Cōme. So do I thinke, that River-land by overflosings, & salt ground with mud, mingled with sand and gravel, will be made much better.

R I C O. You have taught me sundry waies of mending of

36 The first Booke, entreating

ground, I would gladdly now learne the right way of plowing
and sowing.

The manner of
plowing.

Cato. In plowing, and orderly preparing ground so sied, consists the chiefeſt poyn̄t of husbandry. Cato affirmeſt the firſt poyn̄t of husbandry to be to prepare the ground well: the ſecond, to plow it well: and the third, to dung it well. Of plowing and turning up the ground, the fashion is diuerſe, according to the nature of ebery ſoyle & countrie. All great fields are tilled with the plow and ſhare, the leſſer with the ſpade. The plowes are of ſundry fashions, according to the diuerſitie of Countries, ſome ſingle, ſome double, ſome with whelleſ, ſome without; ſome with a great beame, ſome with a middle, ſome with a ſmall, ſome with two halles or tayles, and ſome with one, ſome with a ſcote, and ſome with none at all.

The parts of
the Plow.

The parts of the plow, are the Hales or tails, the Spindles, the ſhelboard, the Beame, the ſhethē, the head, the Reſt, the plowſte, the Whelleſ, the Akerſtraſſe, the Coulter, and the ſhare; and the two laſt are of ſundry ſhapes according to ſundry ſoyles: ſo; in great ſtiffe clayes, the Coulter is made long, ſtrong, & ſtraight; in miſt earths and ſand, it is long, thyn and bending; the point of it ſtarideth before the point of the ſhare, and its office is to cut and diuidre the earth before the ſhare, and the ſhare following after is to turne up the furrow: The ſhare alio is of diuers fashions: in ſome ſoyles it is very broad, with a large wing; in ſome it is narroſ with a ſmall wing, and in ſome it hath neither wing nor breadth, but round and long like a ſpindle; in ſome ſoyles it ſtarideth with the point before the point of the Coulter; in others it ſtarideth with the point behinde the point of the Coulter: now ſo; the gouernement of the Coulter, you are to understand, that it is ruled by certayne wedges ſcimed, ſome above, ſome beloſ, and ſome on either ſide; ſome to put it to the land, ſome to put it from the land, ſome to put it ſoſteſ, ſome to put it backe, and all generally to hold it ſtreight and conſtant.

In Lifland they have ſixtire plowes, nothing but a fewe
In Syrie, where they cannot goe longe ſtreight, they haue ſixtire
plowes, ſixtire ſpades, ſixtire ſhovels, ſixtire ſcavells, ſixtire ſhelleſ,
that whelleſ for plowes were uſed by the Frenchmen, and called
The Englaſ, Germane Name, which excepſt is printed Pla-
na.

nari. In divers places where the ground is stiffe, they have a little wing on the right side of the Coulter, which wing is to be removeth to whiche side you list : with the rod or staffe, well pointed, the plowman maketh cleane his Coulter. When you worke, your Oxe must be poaked eveng together, that they may draw more handsomely with their heads at libertie, and lesse hurt to their neckes. This kinde of poaking is better liked of many, then to be poaked by the horses : for the Cattell shall be able to draw better with the necke and the herte, then they shall with their heads : and this way they put to the soare of their whole bodies, whereas the other way (being restrained by the poake on their heads) they are so grieved, as they scarcely rase the upper part of the earth. And this plowing with oxeen is the best and most constant manner of plowing of all other; for they goe together strongly and soberlie without rash twitches and uncertaines motions which horses doe: onely you must obserue that the boyle where these oxeen worke, be dry and sicke ground, for if be moist and sprung, then by reason of their heabines of bodie, their double drawing and their many time treading upon one ground, they will turne the earth to dust and spyeze : so that in such a case the horse-plow where all goe in one line is more to bee preferred. Where horses may be used, their use is more conuenient for the plow, and the severer of them the better : for many horses draw too hastly, and make too large furrowes, which is not good : whereby we see the ground to be excellently well plained us Gedenland, land about Collyne, where they plow alwayes with two horses, going very softly. In France, and other places, where they plow with Oxeen, they make their furrowes rather deepe then broad. Whiles the ground is stiffe, the coulter must be the greater and the stronger, that it may goo the deeper: for if the crust of the earth be turned up very broad, it containeth still whole, whereby neither the seedes are killed, nor the ground can be well harrowed. The furrow ought not to exceed one hundred and twenty foot in length, for if it doe, as Columella saith, it is hurtfull to the beasts, because they are too much wearied withall: but this rule wheres the fields are large, is not in many places regarded, as in the Countrey of Gulicke,

This drawing with the head, is used in the upper parts of France & Spaine.

The like is used wheres in Norfolk, and Lincolnshire.

Gulicke, where the fields are great, their furrows ar-
drawne very long. You must not plow in wet weather, nor
wet ground, nor when after a long drynght a little raine fal-
ling hath but wet the upper part, and not gone depe. If it bee
too wet when it is plowed, it doth no god that rare. You
must therefore have a regard to the temperature of your sea-
son, that it be neither too dry nor too wet: for, too much moi-
sture maketh it too dantie, and too great drynesse maketh that
it will never worke well: for either the hardnesse of the Earth
resisteth the plow, or if it do enter, it breakes it not small
enough, but turneth up great stakes, hurtfull to the next plow-
ing. For though the Land be as rich as may be, yet if you goe
any depth, you shall have it batter, which is turned up in these
great cloddes, whereby it happeneth that the badde mould,
mixed with the god, yieldeth the woxer Corne.

Dead
mould.

Triall of
good
plowing.

Where you plowed in a dry season, it is god to have some
moisture in your second stirring, which moistning the
ground, shall make your labour the lighter. Where the
ground is rich, and hath long borne water, it is to be stirred
againe when the weather wareth warme and when the
weedes are full grown, and have their seedes in their toppe:
which being plowed so thiche, as you can scarce see where the
Coulter hath gone, utterly killeth and destrogeth the weedes:
besides, through many stirrings, your sallio is brought to
so fine a mould, as it shall need very little or no harrowing
at all when you sow it: for the old Romanes, as Columella
witnesseth, would say that the ground was ill husbanded,
that after sowing had need of the harrow. Moreover the
god husband must trie whether it be well or no, and not on-
ly trust your eyes, which (the balks bring covered with
mould) may easily be deceived, but trie it with your hand,
(which is a certeyn purpos) by thrusting downe a rod into
the furrow, which if it pierce alidin in every place, it sheweth
that the ground is wellplowed. If it bee shallow in one place, &
depe in another, it declareth the ground to be evill handled in
plowing. If you are to plow upon a hill, you must plow
shortwards, and not up and downe: for thereby the incon-
uenience of the expensse is met with, and the labour of both
man

The plow-
ing of a hill

man and Cattell is lightened: But herein you must beware, that you plow not always one way, but sometimes, higher, sometime lower, working aslope, as you shall for cause. Touching the season of your plowing; it must be chiefly in the Spring, time of the Post well teacheth: When as the pleasant Spring, plowing, &c. For in summer the ground is too hard and churlish, and in winter too soule and drudgrie: but in the Spring, the ground being mellow, is easily to be wrought, and the wedes are then best turned in, which both do good for the enriching of the ground, and plucked up by the roots before they have seeded, will never spring againe. And therefore with us, we use to begin to plow about the middest of March: but in sandy and light ground they use to plow in the middest of the winter, if the season will suffer. Plinie is of opinion, that stiffe ground also would then be stirred. A sterre and leuell ground, subject to water, would be first plained in the end of August, and stirred againe in September, & prepared for sowing about the 12 of March. The light hilly ground, is not to be broken up in summer, but about the daies of September: for if it be broken up afoxe, being barren & without rapes, it is burnt up with the sunne, and hath no goodness remaining in it. Wet ground, some would have broken up after the Ides of April: which being plowed at that time, should be stirred againe about the 10 of June, and after againe about the kalends of September, according to Columellas mind. But those that are skillfull in husbandry, agree that after the 10 of June, without great store of rains, you shall not plow: for if the yeare be wet, there is nothing to the contrary but you may plow in July. In the meane time, beware that you daile not with ground over-wet, as I gave you warning before. These are the opinions of the Antients and may agree with the hotter climats, but experience hath found out, and the industry of more temperate soyles know that there is no moneth in all the yeare if the sunne with his dryngthe, or the frost with his hardnesse hould him not out; but the husbandman may and hath good occasion to plow his ground, in January he may plow for bayte or fallow, in Februario his soimes Beanes and Pease, in March and April his soimes Dates, and Warle, in May and June his summer sences, in July

Monthly
employment

40 The first Booke, entreating
and August he failes, in September and October he solves
wheat and vies; in November and December he winter riggs,
and thus the plowmans woche is all the yere.

R 1 C O. May I plote in the night, if I like?
Plowing in CONO. Yea, verie well, in Sommer time, and in hot coun-

tries you may begin in the evening, and continue till the Sunne
rise, that the moisture and fatnesse of the ground, may remaine
shaddowed under the clo : and that the Cattell through ouer-
much heate of the Sunne, be not disraised nor hurt. How oft you
shall plote the ground that you meane to sow, partly the nature
of the soyle, and partly the condition of his sowe will teach you,
as when we come to it, I will tell you: for it is not needful to stir
a granelly and a light ground, soother as the stiffe ground: yet
we finde, that land, the oþer it is stirred, the better it beares.
Wherfor some sowe, you must not only tye fallow, & threafallow
your ground, but also soure fallow it, as they use in the fruitfull-
est places of Italy & Germany. In Misnia & Austria they plote
but twice. Stiffe ground, as they commonly do in Italy, is best
to be solued upon the fist Ricing: in Tuscany, upon the ninth.
Thus hath every Country, both in this, and other matters, his
fashion according to the nature of the ground.

R 1 C O. But may I not sowe one piece of ground every yere
without ricing?

CONO. There are some groundes you may sow yericly, as in
Italy, & in Austria, & likewise in some parts here about the iher-
ber, that are fruitful either by nature, or by ouer fallowing. In e-
ther places you shall obserue the old saying of the husband, Take
not too much of your ground. Virg. would have ground rest every
other yere: which if you have scope of ground, out of all doubt is
best. Herceof had the ground that is solued eþery piere, his name
in the old time: but commonly even the best ground requireth
rest the third, the fourth, or (at the fachest) the fist piere. Vano
sayeth, that in Olymbia the land beareth eþery piere, & eþery
third piere most plentifully. But if you will do well, you must
let it lie eþery other yere according to the nature of the soile, or
else sow it with lighter cor, that loseth out lesse the substance of
the ground, as Lupines & others, that we will shortly intent of.
It is also knawy to be considered, wherfor the ground that you plote

be lay ground yarely sowne, or sallot: If you break up new ground, if it be rich, heauy, and prepared for seed, it sufficeth to plow it once, and to sow it immediatly, who harrow it. If it be light and granually ground, you must thysallot it, specially at the first breaking up.

R 100. Here you speake of divers termes belonging to this trade, I pray you make me understand them before you proceede any farther.

C 100. This Ager, (as likewise all other) hath certayne words Divers L. & belonging to husbandry interpreted by my interpres peculiare, and belonging to it selfe: and because summe rich of god learning haue heretin biene deceived, lest my matter shoulde be marred with dark & straige termes, I wil declare the words as plaine as I can, digressing a while from my former speech.

C 100. If be it by your heautily, Agri P. 100 we take a ground, a field in our speech, not for a Jurisdiction, a Discrict, or a shire, as the old lawlers talke it, but with Iacobus & Florent, we count it a parcell of ground, either earable or pasture. Ager, Arvus, or Arvum, we call earable ground that lieth to plowes and boies. Varrro would rather have it called Arvum, not Ager. The field that is called Rebillis, is that which is remoued, and every yere sowne, railed of the Cetes or a yere, because his fruithousnes continueth to the next yere, and yelmeth his croppes every yere. Ager Novalis, is called of Varrro, the ground that hath bare sowne and fallowed; of Plinie counted to be sowne every other yere: with the Lawlers it is counted gross ne plowed, that hath lyen a yere; we according to the vulgar speech (so we must speake with the most, and inde with the fewest) doe call Novale Agrum; that which is new broken up, and hath not before borne ploughed, whereof cometh Novalium Decimus, the Twelues of newe broken land: yet I know there are some learned that count it that, which after his crop lies lay. Veractum is of Varrro taken for that ground that in the spring time is tare up, and hath borne for a wylle space. Offentum is this also called blouak, both the field that hath lier a yere, and that which is broken up the field spring for this saith Varrro: There is great difference whether you sow in tillled ground, or in that which is yarely sowne, and is called Rebillis, or in that which hath lier awhile, and is broken up in the spring.

spring. Moreover, both Columella and Plinie do write not seldome, Vervacum, for ground new broken up in the spring, taking their reason of the time. The field is said to be plowed, to be stirred with the plow, when it is turned up. It is broken up when it is first plowed, lying in great clods. The second plowing is called Offring, re-agū, or Iterare, to plow againe of somesitare. Tertiare, to chisallot it or sole it. Ager iteratus, & tertius, he dwall words with Columella & Plinie. Novare, is to change the ground, well habanded before, and to plow it and prepare it for the sowing, called winter rigging. Occare, to harrow it as Vatrosmith, is so to break it, as there remaine no clod. The harrow is an instrument crose letticed, to break the clods withall, and to cover the suds. And of these harrowes there are divers kinds, as some of wood, some of Iron, some single, and some double; the wood harrowes are called horse harrowes, the single for the single horse, the double for the double horse; the Iron harrowes are called Dyne harrowes, the single for the single yoke of Dren, the double, yoked. Creare, is likewise used in the same signification. Assare is, when that which is sowne cometh to some growth, is turned in with the plow. In England it is called Sowing under furrow, & is of great use in sowing both of wheat, Barres and pease. Plinke calleth Assare, as it were Attare, to plow often that which is sowne. Savare, is to purg it with the rake. Runcare, is to wade out of the ground nosome weedes, for which is also used Averuncare, and Decuncare; and of Columella, Exberbare, Pastinare, and Repastinare, is to digge about the vines. Pastinum, is a fowle instrument used in the planting of vines. Lirare and Occare, are almost one, where we plow, so as we leauie betwixt two furrowes a ridge, for the dryke keeping of the graine, like a garden bed. And hercole is the spate called Lira, a Ridge, which the husbandmen call Fores, because the place being raised high, defendeth the corne from the water, and Lira Hortensia, a bed in a garden. Scarmnum, a halke, is the yeaſte earth that hath ſcaped the plow. Plinie willeth, that there be no halke made, nor great clod remaining, meaning the great turfe that is turned up at the first plowing. Scarmnus sager is called of Vibius Ur-

banus, and he ſayeth, that he ſaw a man ſet by the plow,

and he

bicus, that land which runneth all in length from West to East, which if it be more of length then breadth, and lyeth up on the North, is called Strigatus. The land it selfe is alid called grosse and raw, that is not well mellowed, which hath need to be seasoned with the heat of the summer, and the cold of winter, and to be plowed in the spring. It is also called tick, fruitfull, fertill: and that which is nought, and yieldes not his fruit, is called leane, barren, hungry, or brimly: also salt, bitter, fennish, where the water still continueth. Wet, that sometime lies dry: Carbunkled, that is burnt with the Sunne, rotten and mossie. It is also called pleasant ground, sweet, blacke, rotten, and melloied, which are the signes of god ground: but herof I think I have now spoken sufficientely. But to returne where I left.

C O N O . When you haue broken up your ground, if it be No-walls, as I said, and not tilled before, you may sow it presently, and harrow it, and if need be, take it. The ground that is yarely sowne, and that hath beene space, is to be plowed thrise, according to the nature of the soyle, and the seede that you meane to sowe.

R I G O . Now you haue told me how to order my land for seede, I pray you let me understand the sorts of seede, and in what sort they must be sowne.

C O N O . What must I do: The seede that commeth of that which the Latines call Fruges, as Pulse, and Corne, we here do call Präger, all sorte of harwest graine: which the Germans call *zweite und dritte*, because they are gathered in their beauty, & their ripenesse. I thinke the Latines, call them Fruges, all things wherewith a man is fed. The ancient writers do handle land in more largely, for all the fruits of the earth. Plinie deuides it into two bards, into Corne that graunes on earth, as Galia the Latines deuides it: the other that beareth roots, as like hame & pulse yea & pebbles. Of the first kind, is Wheat, Rye, Barley, Bigges, Dates, Wheatsheas as Buck, &c if you will in Countries ouer the Rye & Lenten Wheat, though all harshest graine not in al places, has not in every place all one name. In some places you haue the Lenten wheat, quickely where there is plenty of whea-

In other placesthey use neither oates nor Bucke. Of the hinde
of oulfe are there; Beanes, Peason, Lentiles, Chickes, or
Fitches, Eares, Lintels, Lupines, and such like. And though
there be sundry sortes of sowe, and ebery Country hath his hinde,
and sowe such as best agrees with their nature: yet generally
this is to be regarded, that you sowe none that are old and
dried, but the newest: for old seed both oftentimes, as they
waxte, change their nature; as the seed of Colworts, that be-
ing sowne, turneth to Rape; and Rape seed likewise into
Colworts. The seed of the first yare is best, of two yere old
waxte, and of thre, wrost of all, the rest is barren and naught.
The best seed also is, that which is wayliest, and lyeth
in the bottome, and such as is full, and being broken, hath
a good colour such as is wrinkled, and thin in the eare, is to be
thowone away. There is also another necessary note, to haue the
seed from strange ground, and from the wrose to the better,
as not to the contrary, no; from cold Countries into hot,
nor from the soiward to the soi, and to beware that it be not
bitten with Wires, Spise, or Ants. In England the best ex-
perienced husbands will elect their Sowe, especially the
which they call their white sowe, which is the Barley, Ry'e,
Wheat, or Oats, either sowne that which is gleaned or lea-
sen from the Sowme being the principall ears, or that which
is batten from the toppes of the sheaves, or else
that which they take from the great heape, and spreading
it upon the Table, cut out all the best Cornes, and separate
them from the light ones from all manner of meadow whatso-
ever, and then this there cannot be better Sowe sowne. And
to prosper the better, Sprinkle them before they be sowne,
with the leaves of Spindale. If you mingle with your graine
the seed of Wheateare, and sow it about your ground, you
shall sowe it amonge the amoungest of herbs. You must sowe your
Wheateare with an equall hand, and in all places in every
place, letting your foot, (especially your right foot) and your hand
go together: Wheat, Rye, Barley, Oates, and other, chiefly
such as have Corne, as Meliorum, and Panicum, must be
sowne with a full hand, but Spicke sowe onely with three
ingers.

Old Seede
not to be
sowne.

The order
of sowing.

R 1 c o. A man must use his hand & perceiue, as the Warper doth, to make it perfect.

C o n o. He must indeed. And as we put more water to stronger Wheate, than we do to meall, and lay the greater burden upon the stronger man, and some frome heire requires the stronger sowe, so some ground may bear much sowe, and some away with lesse: neither can it be certainly appointed, how much seed is generally to be cast upon an Acre: though I know the old warpers appointed a certaine quantity to every Acre, which perhaps might serve with them: but we should fouly deceiue our selues, if we should obserue the like in every place: First, because some ground requireth more sowe then other, as the ground is of stiffernesse or lightnesse: for the stiffer ground (as in Holland neare the Rhine) requires much sowe, wheras lighter ground requireth lesse. The timely sowing the thimer: and the later, as Columell a saith, the thicker. Secondly, their measures and Acres differ, as the thing that at this day is not thoroughly agreed upon. But now you shall heare what sowe every ground requireth.

R 1 c o. That I long to heare.

C o n o. After long rest, or the first downging, either Barley by Wheate is to be sowne: but Wheate, though it require good ground, yet if the ground bee too rich wheres it is sownen, it will grow too ranke, and lye leadge upon the ground. And therfore upon such ground, it is best to sow your Wheate after a crop of Barley, Pease, or Bucke, and after your Wheate crop, to sowe it with Mie: and them againe (if the ground were not poore) with Barley. In very rich ground, immediatly after the gathering of Mapes sowe, plow it presently for Bucke, wherby you may haue two croppes in one year. In the like manner (when the wheate is sownen after Mie, maketh two harwests in one year). Pease, Weaten, Cares, and fitches, and almost all winter wheate requireth rich ground, whiche afterwards may verely serue for Wheate, Milium, and Mapes. Bucke would not haue Mapes sowne, but in very well dowerght ground: but the same by experience hath shewen. Crops of Mie, in meane ground, you shall haue the same piece great Mapes, Wanties and grashilly double, that will every thirteene yere, for two as that gretely (wherby that well dowerght, you may sowe Mie, or Bucke,

Bucke, and after Dates. In god pasture ground new broken up, you may sowe Dates after the first plowing, after that, Rape seed, then Barley, after that Wheate, or Rie, and at last Dates, or Rie, if the nature of the Countrie be soz it. When this is done, you must either boong it, or let it lye. If the ground be mellow after Barley, in some places they sowe Millet, then Radish, after that Barley, and Wheate, as in Campania: and such ground is sufficiently plowed, when it is sownen in some place where Lenten Wheate is sownen, it rests thre moneths, and after is sownen with Beanes in the Spring, in no other wise may you charge indifferent ground. If after two seasons of Corne, you sow Pulse or Peedware, the barrener ground must rest thre yeres. Some will in no case have you sowe wheat, or Barley, in ground that lies fallow. After ye haue thus sownen your seed in ground thrice plowed and well prepared, then must you straightwates harrow it, which is done with a lettised instrument ful of teeth, drawn upon the ground, whereby the clods are broken, and the seed covered: in some places it is done with a wood tyed to the plote, which they call in latine Lirare. Sometime raking is used, which in the Spring, loseth the earth, made clunged with the cold of winter, and letteth in the fresh warmth. It is best to rake Wheate, Barley, and Beanes noise. Moreover, they breake asunder with the Rake the greater and stiffer clods. Sowing is when the Corne is knotted, the noughty weeds being plucked up, delivereth the rotes of the Corne, and severeth it. To speak of the season of sowing, it is agreed upon of all men that there ought to be no sowing in Winter: for the winter corne, when it is sowned before winter, appeareth above the ground sometimes within a seauen night after, which if it be sowned after winter is begun, it scarcely appeareth in forty dayes after. Some very fondly think it better to sowe in the Spring, then in Autumne. Pliske whitethat in Treness the Harness being in, they haue sowned in the coldest of winter, and taking their ground in the Spring, haue had an excellent growth after. Amongst our best seeds, there are some harder, that are able to abide the winter, which are sowne in hot Countries, as Vng. Italy, about the setting of the Feauen Raynes, which Colum. universitatem be

Harrowing.

Raking.

Rowling.

The time
for sowing.

be about one and 30. dayes after the Autune Acquinoct. that is, the 9. Balenos of November: and in France and Germany in September, & the begining of October, as Rape seed, wheat, Rie, winter Barley, that are nourished in the blade all Winter, & grow up towards earing in the Spring. Some there be that will you to sowe before, only in dry ground and hot Countries.

Some sowing would haue you to sowe in cold Countries after the Autune Acquinoct, in hot Countries later, lest they should florish before winter, and be destroyed of wormes, or blasey. Late sowings alwaies fayle. Some on the other side make haste, saying, That loone sowing sometimes deceiveth, but late sowing ever. It is good reason to sowe thinke in wet grounds, that the seede doth not with so much moisture: and later in dry grounds, lest lying long and not sprouting, it come to nought. Also, in timely sowing, to sowe thicker, because it is slow in rooting: and in later sowing thinner, lest with the thicknesse it be choaked. Summer seedes, which are sowed before the ebbing of the seaoun tides, and in the spring, are Beanes, Pease, and such, Pulse, Millet, Panicum, Sesamum, Summer, Barley, Flare, Hempe, Dates, Vache, Sporis, and such other, are sowed in the summer time. In Asia and Greece they sowe all, as they say, at the setting of the seauen starnes. Now, although there be certaine precepts of the time of sowing, and how much seede is meete for every quantity of ground, surely, they might as I haue said before, for their owne Countrey and nature of their ground, give a kinde of guesse, but to determine anything herein certaintly, there is no man that can doe it, but the ground and every mans owne practise is herein the best Master. One ancient generall rule of husbandry there is, wherein we are warned in cold Countries to sowe late, in temperate Countries sooner, & in our hole Regions soonest of all. Eratosthenes saith, that India is subiect to much raines in Summer, & that then they sow flax, Sesamum, Rie, & Millet: and in Winter, Wheat, Barley, Peda-
ware, and other fruits that we have not. Hesiodus, the Prince in his time of husbandry, wils us to sow according to the custome of Greece, his naturall Countrey. Virgil, Cato, Columella and Pliny, appoint their rules for Italy, whose mindes if you will have followed in all other places, you shal but setke to couer que-
rule.

ry pot with one couer. But to come to the matter, sith the siedes
of sundry natures require sundry times of sowing, & divers sorts
of ordering, & that herein every Countrey hath his guise, I will
here (obseruing such customes as are most generall to them all)
seuerally shew you of every siede by himselfe, and so declare unto
you the order of their sowing. And first, amongst all the fruits &
graine that the earth doth yielde for our sustenance, the chiefeſt
place is righte given unto wheat, called in Greeke ~~εριθρός~~ in Ita-
lian Grano, in Spanish Trigo, in Dutch Weyſs, in French
Fourment, as a graine most needfull for man, & therefore most
fruitfull, because God hath ordained it to nourish man withal.
It is wonderfull what yeld it hath beane of in some Countries.
Augustus his Deputy ſent him frō Bifaice in Africa of one graine
of wheat foure hundred branches. And Plinie witnesseth, that in
the ſame place, one bushell hath yeldeſ a hundred and fiftie
bushells.

R 100. There are that bold opinion, that this which the com-
mon people call Wheate, the Germanes Weis, and the Hollan-
ders Teroe, is not the true Wheate, but a kinde of Rye, and that
the true Wheate which the Italians call Grano, groweth onely
in Italy and in Spaine.

C O N O. That which growes in Italy and Sicill at this day,
differeth not from ours in fashion, colour, no; floore, though the
graine there be ſomewhat great, and the floore more clammy,
which maketh it that it cannot be long kept, ſpecially about
Rome. And whereas our Wheate is either bearded or pollard,
theirs is altogether pold: we call it pold or pollard that hath no
flanes upon the eare. And that we call the Flane, which grow-
eth out of the eare, like a long pitch or a Dart whereby the eare
is defended from the danger of Birds. As with Virg. the Flane is
used for the corne, as the parche for the wheat. Giuina is the hull
of the corne, whose top is the Flane. Frix is the ſmall graine, leſ-
ſer then the corne that growes in the top of the ripe eare. To re-
turne to the wheat, I graunt therow are ſome that doubt of this
wheat of ours, ſuch hath been the iniury of the time (as al things
almost forgotten) we ſcarcey know how to name the ſeed that
we daily feed of. For my part, I will follow common us, as a
Mistris in speach. The old writers have written of ſundry ſorts
of

of wheat, whereof they haue thought that most needfull to be sowne, which they called Robus, as the fairest and waightiest. The second called Siligo, they used in their finest cheate. The third, they called Trimestre, because it would be ripe in three moneths after the sowing. Though Columella allow no such kinde, yet was it most ancient with the Grecches, and called Trimenon, growing onely in the cold countreyes. In Thracia, they haue a kinde that is ripe in two moneths, and is couered with a number of husks, against the extreame cold of the countrey. In our countreyes also we have Wheat and Rye, that we sow with our Summer graine, as we likewise doe Rape seede, but to no great commoditie: for the winter seedes do farre exceed them; and being nouished in the earth all winter, they proue as Theophratus saith, of more substance and profit. Amongst all these sortes, Plinic recounteth the wheat of Italy to be best, both for beautie and weight. We use with us onely two sortes, differing in this, that the one hath smoothe eares without any beards, the other with long beards or Aanes, very round and sharpe, not much unlike to Winter Barley: in all other properties they are both alike. But to make a reconcilment of these words and doubtfull expositiōnes, I will shew the ancient and present practise of the English, who are masters of as much and as many severall sortes of wheat as any Nation whatsoeuer, therfore first for that wheats which the ancients called Robus, the English call it Holescraw wheat, because there is no hollownesse in the straw, but a strong pith which runnes through from knot to knot, this is of all Wheat the Strongest, the waightiest and yeildeth the most flour, yet it is but boorne and darke coloured: it prospereth onely in rich ground, especially a stiffe blacke clay, at the third plowing it must be sowne under furrow, & the greater the clotta that cover it, the better; two Bushells & a pecke will sow an Aker of the largest syze.

That which our Ancients call Siligo, the English call Pollard or Pole-wheat, because it hath no Aanes or Beard at all; the straw is hollow, the corne is large and weightie and of a brighter and paler colour then the former; it is usually sowne under furrow upon the tickeliest clay at the thicke setting, and sometimes upon the Innanies after pease, but then the ground must be rich and strong; two Bushells & a pecke will suffice an Aker.

50 The first Booke, entreating

That which is called Trimenon or Trimestre the English call Ograve or Red-wheat, it is small and cleaner then either of the former and yeildeth a whiter and purer meale, it prospereth in any well mirt hassell earth, and is sowne immedietly after the Pease are reaped, vpon the same ground, and at the first plowing, and is sowne aboue the furrow, and reasonably harrowed after; two bushels are sufficient for any Aker.

Now over and aboue all these the English have divers other wheates which farre exceed any of the former both in outward beautie and inward purenesse of speale, the first whereof they call Flaren wheate, being outwardly more white then the whitest flar, and inwardly full of the whitest flour, so that it yeildeth little or no branne, this wheat (as the former) is sowne on the Inname after Pease and above furrow, and though the yeilde be not so great as the former, yet by reason of the purite & whitenesse it yeilds an equall profit.

They haue also another wheat which they call (by an allusion to the ground whereon it is sowne) Chilter or Chilterne wheat; for it prospereth onely on hils and high places, being stony, chalkie, granelly, and hauing many times not aboue a foote of tare earth to roote in: it is equall, or indeed beyond any of the former for purity and finenesse, and not much inferio: in yielding: it is sowne in September and October above furrow, after the third plowing, and two bushels is a sufficient quantity for any Aker: Thus much be spoken for the English custome; now for the generall practise of other Nations.

All wheat is sowne in September, the season being faire, the ground thicke ploughed and well raked or harrowed, although you may sow it very well after once ploughing, vpon ground where Pease, Laces, or Bucke hath bene newly had off, in a god soyle, Plini and Columella would haue you sow of Barheat and Rye, nine bushels vpon an acre: but as I said before, this measure is to be measured with reason. Wheate at this day sow not so much Wheate vpon an acre, as Rye, nor so much Rye as Barley, It is best, if the winter be like to be cold, to sow the sooner: if warme, the later. Wheate delighteth in a leuell, rich, warme, and a dry ground: a shadeweare, warwey, and a hilly ground it loueth not, though Pliny say the hill yeildeth harder Wheate, but

no great store. After it is sowne, it putteth out a great company of small roots: and appeareth at the first ioynt of blade: it hath sundry stalks, but such as cannot branch all the winter, as other winter corne is, it is nourished in blade: when the sowing diuideth on, it beginneth to spindle: upon the third or fourth ioynt thereof, commeth out the eare, which first appeareth inclosed in the blade, it flowereth the fourth or fifth day after: if it grow too ranke at the first, it is eaten downe with cattell, or in some place mowed: it is after weeded: it floweres about the 10. of June, sooner or latter, as the perte falleth out, even at one time almost with the time: two noble floweres, with comfortable sauerour flourishing at once. Varro affirmeth, that the wheat lyeth 15. daies in the blade, flourisheth 15. and ripeth 15. After it hath flowered it waxeth greater, and as Theophrastus saith, is within so[n]tie daies after full ripe, wherewith the latel[i] they reape in the eight moneth. Other say in sixe and thirtie daies, and reaped in the ninth month. It never eates, till all his ioynts or knots be growne. There are fourre ioynts in wheat, as Plinic saith, and eight in barley: but in our country and our daies, both Wheat, Rye, Barley, and Dates, haue but fourre, and not that alwayes. Before the full number of the ioynts, there is no appearing of the eare: which when it commeth, beginneth to flower within fourre or five daies, and so many, or little mo[re], it safeth. When the flower is gone, the graine begins to swell, and in fourre or five daies after, to ripe. The blade of the wheat is sometimes like a wedge, but narrower then the barley: the spindle, stalk, or straw therof, is smoother and gentler, and not so brittle as Barley. It is closed in many coates. The stalk that beareth the eare is higher then that of the barley: the eare groweth more upright, and farther from the blade, the chaffe is softer, sweeter, and more full of syrpe, the eare of wheat is out of order and uneven, as well of the pollard, as of the bearded, whereas Barley hath his eare of just number, and in perfect order. In Bactria, it is said a graine of wheat is equall in quantitie to an eare of our wheat. In Babylon, the blades both of wheat and barley, as Herodotus reporteth, are fourre inches broad. Wheat, as Columella writeth, after the third sowing changeth to Rye, which hath

Rye.

25.

25. 2.

bene knowne in Germanie, as I sayd before in many places; Of wheat is made Amyl, the meaning whereof, Cato and Dioscorides teacheth. After wheat we sow with vs Rye. There are that thinke it to be that which the Greces call *taupe*, though Homer take *taupe*, for a kinde of food for horses, but that can-
not be, for there is no graine whatoever so unwholesome for an
horse as Rye, having that purgative qualitie in it, that it ma-
keth a horse scoller to death*. Some others take it for a kinde
of wheat. Herodotus sayth, bread was made of it. Of Laurentius it is called Far. Of Gas, Siligo. Divers learned men call
it Secale, and take it for Plinies farrago. The Frenchmen call
it Segr. The Dutchmen Rock. The Italiens, almost as the
Latines, Sagala: the graine is something blacke, and maketh
blackish bread. But to passe over all controversies, I follow the
Country speech, and take Siligo for our common Rye, which is
sowed immediatly after wheat, about the end of September, or
in the beginning of October, in good ground: in sandy & grately
ground, it is sowed in February, and called Summer wheat: it
requirereth the best ground, warme & fast, and resueth not light
ground and granely, so it be heaped with dung: it loueth wet
ground as ill as wheat, both requireth to be solwen in deepe mould &
plains soyle: but Rye is sowed a little after wheat, in the sow-
ing whereof you must occupy a third part more than of Wheat:
it prospereth lightly in any ground, and many times with the
yield of a hundred for one. It must bee solwen after the third
plowing, as Wheat, and harrowed much after the same soyl, the
stalke of Rye thereof, is smaller than the Wheat stalke, tal-
len, and stronger, his eare hangeth downwards, and therfore
more subject to blasting, because it receieth & keepeth the water
that fals while it groweth, and suffereth the violence of mists &
frosts: the straw thereof is gentle and flexible, serving for
vines and coverings of houses. Thus much for the opinion of
the Ancients & ancient customes; but to come to the present
practise of England, where much of this graine is solwen: they
obserue to solwen about the latter end of September, & rather be-
fore wheat than after, because it desirereth the fairer & drier sea-
son, for wheat loveth a shower, & a sticking mould: but Rye is so
contrary thereto, that they say, it will drye out in the hopper, that
is, the smallest raine kils it in the solwen.

in

in hot sandy grounds, at the third plowing, and prospereth also upon any light hassell earth which lyeth by ie. And howsoever the opinion of the ancients and some moderne utterly damne and disallow it for any clay ground, yet the English finde and know that it will flourish upon any rich Clay where the mould is made (by oft plowing) dry and mellow; and they finde that one Aker of Clay Rye well handled is worth two Akers of any sand-Rye whatsoeuer. Rye must be sowne in an indifferent furrow, and well harrowed, and the mould thoroughly broken: two Bushells is a sufficient quantitie of seede for any reasonable Aker*.

Now followeth Barly, accounted in the old generations ^{Barley.} among the worthiest sort of graine, and not of small estimatiⁿon at this day. The Italiens call it Beade or Beau, or Orza: the Spaniards Ceuada: the Dutch men Gerst: the French men Orge: the Grecians ^{ηριζη}: and though it be used in Greece and Italy, and such warme and fruitfull Countries for Castles ^{θρονοις}, as Homer also witnesseth, yet in the Northernne Countries it supplies the place both of bread and wine. There are of it two sorts, Hexastichon and Polystichum, whose ears are either in fourre, & sometimes like square, and divers ears spranging from one graine, every ear containing above four score graine, so wonderfull are the gifts and blessings of God. The other sort is called Distichon, having in the ears but two rankes of orders onely. Again, there is one kinde of it to be sowne in winter, another for summer. The winter Barly is of better yeld, but it is some hurt, specially with much wet and frosty weathering. There is nothing more hurtfull to winter Cornes specially Barly, Rape seede, and Rie, then the wet of winter, nipp'd with often frostes, and after a longish rain, to be presently frozen againe: both the sortes of Barly require ground that is very rich. Winter Barly, after two or three plowings, is to be sowned in September: Dauncier Barly in March or April, after twice plowing; and many times necessarie sowing, after once plowing: in the sowing you must occupie more seed by halfe, then in sowing of wheate: it requireth a mello: and a fat ground, and therfore is best sowned, where the ground is most manured. The winter Cornes followeth in May, and is ripe in June at the furthest. This

hime was not wont to be sowed in these places, but great numbers, new moved by my example, do use and receive great gaines by it. The summer Barley in many Countries is ripe and ready in thys moneths after the sowing. In Aragon, as Plinic wryteth, it maketh double haruests every yere. The seventh day after it is sowne, it commeth vp, and one end of the scede turneth downe in roote: the other, the scoter springeth, and commeth up in the blade: the greater end of the graine maketh the scot, and the scanderer the flowre. In other graine the roote and the blade spring both from one part, the blades of both kinds are rough. It must be gathered with more spide then other graines, for the straw of it is very brittle. Of Barley is made, as Dioscorides wryteth, both Bere and Ale.

R 1 0 0. I like your Bere you haue excellently well, I pray you tell me in what sort you make it?

27-

Thomas
king of
Malt.

C O N S . I will not hide my cunning in this matter, and herein I will follow the custome and order of the English who are the great masters of all Christendome in this art; and both France, the low Countries and other Nations are but thys Imitators; They first turne their Barly into Malt in this manner. They take a god quantity of Barly and put it into a Cellarme or Fatt, and so stape it in water the space of thys night, then draine it from the water and let it dryp a day, then lay it on a faire shooe in a great thickhe heape or centre, and let it to lie thys nightes more, in which space it will sprout at one end (for it must not sprout at both:) then they spread it very shew all over the shooe, and either with a shovell or the hand it must be turned and tasseled twice or thrice a day, for the space of certayne dayes more, for to make perfect Malle it must have full thys workes Fatt and shooe; then they haue it byon the Billie with a gentle fire, of sweete straw, for any other fuell yeldeynge stronge a smokyng and giveth the Malle an ill taste: after the Malle is dries, cooled, rubbed cleane shrened or minned, then it is sent to the Mill and ground according to the proportion of the Barling, whiche if it be ordinary houle bere Bere, then they waies of every quarter of Malle, that bongheates of Bere; but if it be soy extraordinary stronge bongheates, then to every hogghead you shall allein one quar-

ter of Malt, a peche of Pease, halfe a peche of Wheate, and halfe a pechs of Dates. Now for the browing of this ordinarye Beare, (after the Malt is ground) they put it into a mash-sat, and the liquo; in the Lead being ready to boyle, put it to the Malt and mash altogether, let it so stand an hower, then drayne the liquo; from the Malt, & put it in the lead againe, & add to it so; every quarter of Malt a pound & an halfe of hops, & boyle them ouer for the space of an houre, then cleane the liquo; ouer wort from the hops through a strait Sine into the Coler, which standing ouer the Guyllsat, you shall let the wort runne thereinto: then put two your barne, and after they haue wrought then beate them together, and doe this so: divers times together, then turme your Beare into hoggheads, let it purge well and after close them up. This Beare may be drunke at a soxnightes age, and is of long lasting. In this manner you may brew strong March Beare, altering only the quantitie of Malt, and also strong Ale with abatement of Hops*. There is made of Barley Alica, a reasonable god meat, and Frisan. How they must be made, you may read in *Zea*: Plinic: Next to wheat and barley, followeth *Zea*, which the common people, both in Italy, Spaine, and Flanders, call *Spelta*, the French call it *Espeltra*; with Honor is greatly commended, *sicut p. s. dicitur*, the fields that beareth the *Zea*, being as Galen saith, the meane betwixt wheat and barley, so; he hath the qualities of each of them, and is of two sorts, the one in stalk, boyn, and eare, like to Wheat, and carrieth in every huske two siedes, and therfore is called *Simone*, the other having both stalk and eare shorter, and but one graine in every huske, growing in rankes, and in the top resembling Wheat with his sharpe lances. In Italie, specially about Mirandula and Concordia, it is used in provender for Horses, it is not in these Countries in use. I would sow it here, sith the ground will serue for it, and that both bread & drinke might be made of it very well, but that it is something troublesome to grind, because of the double husks. It desireth a moist ground, rich and god, it is sowed after the same manner that Wheat is sowed in September or October: it floroweth in June, and is ripe in July, very miyte for colde Countries, because it can abide

diverse fructis and floures. The next is Far, which was a general name to all corne, as wheat Far, Barly Far, and Rie Far, and when mils were not yet devised, they did beat their corne in morters, whereof came, that the meale was halleld Farina, yet after, was the name of Far, only given to Adoreum, though Columella calleth alwayes Far Adoreum, making seuerall y sortes of it. The Frenchmen call it Brance, the Italian's Sandala, the Spaignards Escanda, the most people of our Country call it Farro, the Dutch Keskorne, whose graine is very like wheat, but that it is shouter and thicker, and where wheat hath a clift, there hath it a rising. It is heavier then barley, and lighter then wheat, it yaldeþ more meale then any other Corne. The people of Rome as Plinie saith, lived with this Corne at the first three hundred yeres; it groweth in Egypt without dene, with a greater easse and a waughtier: it hath in the stalke seauen icynys, and cannot be clesned except it be parched. France hath two sortes thereof, one of a reddish colour, which the people call red wheat, the other whiter, which they call white wheat; the eare is three square, not unlike to spelt. In Italie they maketh pottage of it for their labourers. Far or Adoreum, Virgil woulde haue sowen before the setting of the seaven starnes, after the Aquinoctiall of Autumne: but in wet and cold barren grounds, it is best to sow it about the Halends of October, that it may take depe root before the freezing and cold in the winter. It is sowen in low ground, waterish, and chalky: after it is sowen it must be harrowed, raked, and weeded: the taking in seth in the spring, the heauy shadys of winter. In taking or harrowing, you must take heed, as I sayd before, that you hurt not the rootes: weeding when it is knotted, sovereth the Corne from al annoiances. The Frenchmen sow it in hollow furrowes, because it is very subiect to blasting, thinking thereby to preserue it both from blast and milde w. To sow it in hie ground is discommended, though it prosper there well enough, because cattle cannot away with it, for the shapnes and roughesse of the eares, and because it requireth great labour in getting off the husks, which if it be not cleared of, is neither good for man nor beast: the uncleane chaffe doth hurt with the Cough, the Cattles lungs. Amongst the winter sedes, Rape sedge doth challenge his place, which I take

take to be the seed of the Rape, which Plinie maketh for his third kinde and wilde, whole roote, like the Radish, runneth in length, the leaues being tasse, like the other kindes, and the stalke bushy and full of banchas: the roote of it is gree for nothing, but is onely sowed for the seede, whereof they make Oyle, serving for paue mens hitches, fasts, and lights, specially in Germanie, where they want the Oyle of Olives, whereby ariseth great gaines to the husbandman. In the hot Countries where they haue other Oyle enough, this is of no use, but in feeding of Birds: it is sowen in the end of August, or in September: how be it, sometime it is sowne in March among the Summer seedes, but to nothing so great a profit: it is cast into very rich ground, or well manured, thrice plowed and well tilled; it must be sowen very thin: for being a very small seed, it must not be sowen with the full hand, as wheat is, but onely with threingers. It prospereth also exceeding well in those grounds which are newly wonne from the sea, and both taketh from them their overmuch saltnesse, and bringeth them unto fertillitie, and therfore it is ever the first seade that is to bee sowne vpon such earth. It flowzeth in March, or thereabouts, as the yare is forward, and continueth his flowing a long time: the flower is yellow, and very sweet, wherein Biues doe much delight: as soone as it hath left flowing, it is presently ripe: it groweth two cubits in height, bearing a plentiful seede in little small cobs, it tendereth for one bushell, a hundred bushels of seede. It is of two kinds, male and female, the one hath a longe roote, the other a round, and of both the husbandman maketh a very good oyle.

The summer seedes are almost all such as are ripe within thre moneths, or soure at the uttermost after they are sowne, and some of them sooner, if the ground and the weather bee good. Among the summer seedes we will first talke of graine, and after of pulse. Of the graine, Oates are the first that are sowen, though Virgill count them barren and Plinie counteth them rather weedes then corne, affirming, that Barley when it prospereth not, will many times turne into Oates: yet the Frenchmen and the Germanes count (it at this day) the best provender for

for Horses, and food for Cattell. Plinie also witnesseth, that the Germans used to make pottage of Dates. And Dioscorides maketh mention of Daten pottage, *θάτερι βαζίντας*, pottage of gruell is made of Dates, it is called of the Greeks *βραγές*. in Italian Vens, in Spanish Auena, in French Auoine, in Dutch Hauer; which though it grow not commonly in Italy, yet upon Monte Ficelio, and in the kingdome of Naples about Siponto it is found. Wee have amongst vs two kindes of them, one full and weightie, sowing in bare yerss, to make bread and drinke of, specially if it be medled with a little Barley, and this kinde prospereth in tich and new broken up ground exceedingly. The other kinde is lighter, which the common people call Ginen and Bumhaber, it is very light, and yeldeth but little flowre nor sowd: it groweth upon sandy and barren grounds, and setteth well for Cattell and for Horse: both the kindes have bushy tops, from whence hangeth the seede, in likewise resembling the grasse-hopper: the flowre of it is white, and from one graine, there springeth divers stalkes: with Dioscorides, Bromos, is a kinde of Dats that resembleth wheat in the stalke and the blade, and groweth like wilde wheat. Theophrastus calleth it *αγαστα*. The Date is not dangerous in the choice of his ground, but groweth like a god-fellow in every place, wher no seede else will grow. Of the like disposition is Buck or Witchwheat, unknowne to our old fathers. It is called *οχύτρη* or *μελαγύπτης*. Blackewheat, though *μελαγύπτης* signifieth another graine. I had rather call it Witchwheat, because the graine thereof is threecorned, not unlike the Witchmase both in colour and forme, differing only in the smallnesse. The stalke is very great, and straked like to the greater farnme: it hath many branches, with a bushy top a great sort of white flowers in a knop, like the flowers of Elder: it flowzeth long together, & after appeareth the graine, first white and greenish, in shape threecorned: after they be ripe the colour changeth to blacke or brownish, like a Chestnut. This graine hath not long since bene brought from Russia and the Northern parts in Germanie: now it is become common, and used for fatting of Hogs, and setteth the common people in deate seasons, to make bread and drinke withal. It may be sowed in any ground, and

is sown in Apill, May, and in June, after the reaping of Rape seed. You must sowe lete of it upon an Acre by a southe part then of Wheat or Rie : it is much used to be sown upon the ground where Rapes grow, whereby the ground doth yeld a double crop in one yere. When it is sown, it commeth up if it be moist weather, within fourtysix dayes after, having two leaves at the first appearing, not much unlike to Purslane. Some again preferrre the other Millet, called in Latine, *Milium*, Millee, in Greeke $\mu\eta\chi\alpha\tau\alpha$, in Italian *Milio*, or *Miglio*, having as it were, a thousand graines in a eare, as Festus seemeth to answere; in Spanish *Mijo*, in French *Millet*, and in Dutch *Hyers*, where they make pottage of it and bread. The Russians and Huscovians are cheily nourished with this kind of pottage, which they make with the flowre mingled with milke, and the bloud that they let from their horses. The men of Indy, as Plinius sayth, know no other graine but Barley and Millet, which grew in his time plentifullest in Campania, it is the best Leaven that may be made, neither is there any graine comparable to it for waight, that more increaseth in baking: for of one bushell hath bin drawn threescore pound of bread, and a bushell of sodden meat, made of thre quarters wet and unsod. It is sown at this day in every place, though very little in the low Countries: it groweth with a stalke full of royns, a cubit high, a leafe like a rade, a round & a small seede hanging downe in long timmes with many tops: it groweth somtime seven fote high, it delighteth in a watry ground, and in gravell, so it be now and then overslowne, it hateth dry and chalkie grounds. Some give counsell to sowe it first in a cold and wet ground, and then in a hot ground: before the spryng you must not sowe it, for it delighteth much in warmth. A little seede of it is sufficient for a great deale of ground: if it be sowne thicke, it comes to nought: a great handfull will seene a whole Acre, wherefore in raking, you must take out what is more then needfull: an acre beareth fiftene bushells, if it be well sowne, every bushell yieldeth about a peckell. It is forbidden to be sowne among Grapes or fruit Trees, and must continually be weeded and raked. When the eare is full grown, it must be gathered with the hand, and tyed in the sunne, for the hot weather shatter the stipes. This graine

graine may very long be preserved, so being well laid up wheres
the wind cannot come, it will well last an hundred yéars.
There is another like graine that they call Indian Millet,
with a great graine, and a blacke and big ready stalke, which
was first brought into Italy in the raigne of Nero, which (as
Plinic saith) was called Loba, whereas Lobz are rather the
Cods of all Pulse, and Lobz, the manes and topes of Millet,
as it appeareth by Theophrastus. Panicum is called of the Greeks
^{"σάυρος"}, of the Dutch Pannich, or Heidengreis, of the Itali-
ans Pannacho, the Spaniards Panizo, the Frenchmen Paniz, so
called of the little Pannicles, wherein the seed lieth. It com-
meth vp like Millet, with many leaues, and lippes, glittering
with a reddish bushie top, full of seedes, like Mustard seede,
some yellow, purple, blacke, and white: it must be ordered in all
thing almost as Millet: being sowen in Summer, it is ripe
in sixte dayes after: in other places sowen in May in wet
ground, it is to be gathered in September. The haruest, and
the use of it, is almost all one with Millet, neither can it, as
Millet, be fined without patching: when it beginnes to spindle,
it must be well weeded least the weedes ouergrow it: being
well dress with Chassill and Milke, it maketh indifferent good
meat: in bread it is not so much uses as Millet, for the bread
is very drye, and crumbleth like Sand or Ashes, being altogethe
ther without moisture or cleaving: but the common people re-
meddyng that with Lards or Oyle, do make a shifte with it as
well as they can. They that dwell about Pontus, are said to
esteme it aboue all other food, as the people of Nauarre doe at
this day. In many countries it is used onely to fede pigeons
withall.

Rise.

Of the number of outlandish graine, is Riso, in shape as
Theophrastus saith, like Darnell, having a bushie toppe like
Millet or Pannicle, but no eare: his graine is like the kinde
of Barley, called Zes, the leaves are thicke like the
leaves of Letches, but broader, the stalke a cubit high, the floore
purple. This graine is but geason in Fraunce and Germanie,
but in Italie and Lombardie common, where it is called El-
riso, and Menestro Delriso, the French men leaving the first
letter, do call it Rison, the Greeks, ^{αρρόν}, the Spaniards call it
Arros.

of Earable-ground and Tillage

68

Arrost. Pliny supposeth it to be engendred of the water hedge. There is made of it *fumentie*, as Horace calleth it, *Rise fumentie*. It is sown in March, as Millet and Pannicle is. The Indians (they say) doe bruse it before they sowe it, to make it the lighter of digestion. And as Strabo reporteth, they make drinke of it. Herp is *Sesamum* named with the *Greekes* *σεσαμον*, *Sesamum*, the *Italians* *Sesame*, the *Spaniards* *Aionoli*, the *Frenchmen* *Lugiolin*. In times past, it hath bene more used and greatly commended, both of Columella and Pliny. At this day it is knowne to a very few, as a great sort of seedes else are, in so much as the very co:ne that we daily sowd of, we scatlye know what it is. Some reckon it in the number of *Caine*, and some of *Pulse*: the stalkie thereof is not like Millet or Pannicle, full of ioynts, but plaine and smoth, like a rye, the leaves thereof ruddy, the siede white, not so bigge as *Linsed*, and is contained in little knobs like *Poppie*: it is sown before the rising of the seauen startes, after the manner of Italy. Columella saith, that he hath sene it in Cilicia and Syria sowed in June and July, and reaped in Autumne. It requires a melloi: blacke mould, though it will grow upon good ground, sandy ground, and soi:ed ground, raine is hurtfull unto it after it is sowed, whereas it doth good to all other *Caine*: no great Cartell nor Dormine will meddle with it, it hurteth ground very much, because of the great quantitie and thickenesse of the stalke, and the number of the rootes. Pliny writeth, that it was brought out of India, and used both for meate and oyle. But to returns to such graine as we are acquainted with. Amongst the sommer seedes is *Murcelia* or *masepine* to be reckoned. The husbandmen doe sometime make a medley of sundry sorts of seedes, and sowe them partly for Cartell, and partly for hope that though some of them faille, yet some will grow. But here must you beware lest you mingle not winter *Cayne* and sommer *Cayne* together, so that were a great oversight, and one of them must needs be ill. Some bacheys may well be mingled with *Dates* or *Wheat*, as well for brewing, as for feeding of *Cattleis* and *Croates* or other like Pulse may be mingled with *Dates*, as herbe good for beasts. Where are to bee sowed in time, and places, as I have tolde before agayn: my generall curteisane of them. Also

Also Wheate and Rye may well be mingled together and bringeth forth an excellent Halline, wherof is made very good househould bread.

R I G O. You haue well satisfied me for Graine and Coyne, you may now (if it please you) doe as much in Pulse.

O f Pulse.

Beanes.

C O N O. Pulse o; Peperware, called of the Greekes *τριγωνα*, the other parts of the frutes of the ground: of these there are sundry sortes, as you haue seene of Coyne: some put Millet, Panicle, and Sesamum to this kinde, because Colomella sometimes puts them in the number of Graine, and sometime of Pulse: but I following Plinie herein, doe put them amongst the kindes of Graine, accounting those to be Pulse, whose seedes are contained in coddes, as Beanes, Pease, Lentiles, Lares, Chyches, Fitches, and such like, which all are to be sowne in the spring. Of all kinde of Pulse, the greatest honour is due to the Beane, as Plinie witnesseth, as to a Pulse that is most commodious for man and beast. In Greeke it is called *τριγωνος*, in Italian and Latine Faba, in Spanish Haus, in French Feue, in Dutch Bonen. This amongst all other Pulse groweth in height without any stay, it hath a thicke leafe, a crested flower of divers colours, spotted white and blacke, which Varro calls the lamen-table letters: it hath a long codde, his fruit within broad, like the nayle of a man, of divers colours, it appeareth at the first with many leanes like a Pease, and not with one alone, like wheate. It is sowne first of all other pulse in the spring time, as Virgill will have it, and timely, because of Fabalia, which is the offall of the Beaines, for both the cods and the stalle, is a foode that cattle much delights in. Colomella reporteth how he heard a chaffull husbandman say, that he had rather haue the offall of Beaines timely sowne, then the Crop of that which is ripe in these monethes; you must sowe them in the encrease of the Hoone, and after once plowing. It is said, that if they be enclosed in Goates doong and sowne, they will yeld great encrease, and the part that are eaten or gnawne, in the increase of the Hoone will fill up againe. If they be sowne neare to the rootes of the Leres, they will kill them. Some hold opinion, that if they be steeped in Capons blood, they will be safe from all hantfull wodes, and that layed in water a day or two before

before they be sown, they will grow the sooner. The Beane delighteth in rich and well dunged ground, as all other pulse doth: wet and low ground it doth not refuse, though all the rest desire dry ground; it waereth not weeding, being able to over-grow them. Of all other pulse it onely springeth with an upright stalk full of knots, and hollow. And whereas all other pulse are long in flower, this flowereth longest, flowing soote dayes together, one stalk beginning when others end, and not all at one time as wheat; they com in sundry dayes, the longest part of the stalk flowing first; and so upward still in order. So fructifull are they in some places, as you shall find one stalk to beare a hundred beanes. The Beanes sticke close to their cobs: the blacke in their tops, the Latines call Hilm, the cobs Valvuli, the wormes that breed in them, Mida, Lomentum is the meale which the people in the olde time did use for the smoothing of their skins. Fresa Faba was the beane that was but smallly broken and hulled in the mill. Refrina was that which they used to offer in sacrifice for good lucke with their Corne. It is good to keepe your Beanes, in the water of saltwater, a day before you sow them; you shall keepe them from Wyuels, as (Palladius saith) if you gather them in the wane of the Spone, and cherishe them, and lay them up before the increase. Beanes, and all other pulse doe mend the ground that they are sownen in. The next to beanes in worthines and sowing, is Pease, called in Greke *πίσις*, in Italian Pisca, and Piselle, in Spanish Aruera, in French Pese, in Dutch Erretew, a Pulse that groweth with hollow stalks and full of branches, lying upon the ground, many leaves and long, the cobs round, containing in them round sieves and white: though Plinie write, that they be cornered as Chyck, of which sort we have some at this day blewish with hollowes in shape like the Butterlie, purple coloured toward the midst. There are two sorts of pease, the one sort covet to climbe aloft, and runneth up upon stiches, which with little winders he bindeth himselfe, and is for the most part only sownen in gardens: the other sort groweth low, and crepeth upon the ground: both kindes are very good to be eaten, specially when they be young and tender, they must be sownen in warme ground, for they can in no wise away with cold, they are sowne yester upon

upon fallowes, or rather in rich and yeerely bearing ground once plowed, and as all other pulse, in a gentle and a mellow mould, the season being warme and moist. Columella sayth, that ground is made very rich with them, if they be presently plowed, and the coulter turne in, a cover that which the Hooke hath newly left. They are sowen among summer Corne, commonly with the first. First Beanes, Pease, and Lentiles, then Lares and Dates, as is said before. Pease and Lates must be sowen in March and Apyll, and in the warke of the Hone, lest they grow too ranke, and flowre out of order, where as the best sowing for all other pulse & graine is in the encrease of the Hone. There are that count Pease to be the pulse that the Grecches call $\gamma\beta\sigma$, the Latins Eruum, the Italians Eruo, the Spaniaros Yeruo, the Dutch men Eruc, of which there are two kindes, the one white, the other red. The latter is wilde, and groweth in hedges and Cornefields : it is a small plant, having his leadeas narrow and slender, his flowre either white, or medled with purple, growing neare together like Pease, there is no great busynesse about it : it delighteth in a leane barren ground, not moist, for it will be spilt with too much ranckenesse : it must be sowen before March, with which moneth it agreeith not, because it is then hurtful unto Cattell. Erulia is a pulse like small beanes, some white, some blacke, others speckled, it hath a stalke like pease, and climeth like a Hoppe, the Codds are smooth like Peascods. The leaves longer then the leaves of Beanes : the flowre is a pleasant swede to Bas. In France and Lombardie it is called Dora, or Dorella. Phacelius in Latine, in Grecke οὐλαῖς καρποῖς, garden Somalar, some call it Faciolum, and Dolichium, among the Italiants some call it Fagioli, some Smilace, deglibortis, others Fagiolo Turcheses, others Lafanio, the Spaniards call it Friesoles, the Frenchmen Faoles, and FalesPinccos, the Dutch men Faccien, or wilse bonen. And in England it is called the hydryne beane, and being young and tender it is an excellent sallet, and is eaten altogether cod and all. It is a kinde of pulse, whereof there are white, rede, and yellow, and some speckled with blacke spots, the leadeas are like Idie leadeas, but something tenderer, the stalke is slender, winding with claspes about

about such plants as are next him, runneth up so high, as you may make Arbours under him: the coddes are longer then Fenigreeke, the Graines within diverse coloured, and fashion'd like Kidneyes: it prospereth in a fat & a perfectly bearing ground, in Gardens, or where you will: and because it climeth aloft, there must be set by them poles or stakes; from the running to the tops, it climbeth upon trees, serving well for the shadowing of Arbours and Sommer houses. It is sowne of divers from the Ides of October to the Halenes of November in some places, and with us in March; it flowzeth in Summer, the meate of them is but indifferent, the iuyce not very good, the cods and the graires are eaten together, or like Soporage. The Jeunes sell them at Rome, preserued, to be eaten raw. Lens and Lenticula, in Greek *paxis* and *paxi*, in Italian Lentili Lyniles, ie bon manastre, in Spanish Lentiza, in French Lencilla, in Dutch Linsen, is a Pulse very thick and bushie, with leaves like the Lace, with threyns four very small graines in every rod, of all pulses the least, they are soft and flat. The white ones for their pleasantnes are the best, and such as are aptest to seeth and consume much water in their boylung.

It is sowne with us in Germanie, in March and in April, the Spaine encrasching, in mellow ground, being rich, and dry: yet Plinie would rather have the ground leane then rich, and the season late: it flowzeth in July, at which time by ouermuch rankenesse and moisture, it sone corrupteth. Therefore to cause it quickly to spring and well to prosper, it must be mingled with dry dung before it be sowne, and when it hath beene mingled sowe it fift dayes, it must be cast into the ground. It growmeth high (as they say) when it is wet in warme water and saltpeper, before it be sowne, and will never except being sprinkled with Bengelwing and Vineget. Varro willeth, that you sow it from the fine and twentis day of the Spaine to the thirtieth, so shall it be safe from Squales. Columella affirmeth, that if it be mingled with ashes, it will be safe from all annoiance. Cicer in Latine, in Greek *ciceris*, in Italian Ceci, Cicore Resso, and Cicere bianco, in Spanish Garuango, in ^{Ciche or} French Chiche, & in Dutch Cicerbui, is a bushie kind of Pulse, having a round Cor, and therin a couple of three corneres.

whereof there are that make their hentes, white, red, and black, differing only in the colour of their flowre: the best kinde hath a stickie halfe, crooked, little leaves interlaced, a white, a purple, or a blacke flowre. And whereas other pulse have their Cobs long and broad, according to their size, this beareth them round: it delighteth in a blacke & a rich mould, it is a great spoyer of land, and therefore not good for new broken up ground: it may be sowne at any time in March, in rainie weather, and in very rich ground: the seed must be steeped in water a day before it be sowne, to the end it may spring the sooner: it flowreth in June and July, and then falleth to seed: it flowreth a very long while, and is gathered the fourth day, being ripe in a very short time: when it is in flowre, of all other pulse it receiveth harme by rains: when it is ripe it must be gathered out of hand, for it scattereth very sone, and lyeth hid when it is fallen. In the Chich there never breedeth any worme, contrary to all Pulse else: and because it dwelleth alway Caterpillers, it is counted good to be set in gardens. Cicercula in Latine, in Greekke *αιγισση*, in Italian Cicorse, in Spanish Cicerche, it differeth from the Chich, only in that it is somewhat blacker, which Plini accounteth to have evill corners, as pease hath: and in many places about us, they use them in stede of Pease, esteeming them farrre above pease: for they both yield more flowre then pease, and is lighter of digestion, and not so subiect to wormes. Columella counts it rather in the number of fodder for Cattell, then of pulse for man, in which number are those that follow. And first, Vicia in Latine, in Greekke *αιγισση*, in Dutch Wycken, in French Vesne, so called, as Varro thinkes, of winding, because it hath tendrels or claspes, as the vine hath, whereby it climmeth up on such stalks as grow next it: it groweth half a yard high, leaved like Lintell, fawng that they be touching narowber, the flowre like the flowre of Pease, having little blacke spars in cobs, not altogether round, but brenck like the Lintel: it requireth a dry ground, though it will grow well enough in shaduoy places, or in any ground, with small labour, being not troublesome to the husbandman: it requireth but one plowing, and harrowing for neither harrowing nor weeding, but entched

Cicercula.

Tares and
fodder for
Cattell.

enricheth the land of it selfe, specially if the ground be ploughed when the crop is of, so that the stalkes may be turned in; for otherwise the cotes and stalkes remaining, do iuste out the goodness of the ground: yet Cassius would have it sowne in grassie ground, not watriish, and in new broken-up ground, after the dew be gone and the moisture dried up with the sunne and the winter. You must beware that you sowe no more, then you may well cover the same day, for the least dew in the morning both spoyle it. Neither must you sow them before the Sproule hath entrie four dages old, otherwise the Sproule will devoure it: his time of sowing is, as Pliny witnesseth, at the setting of the Starre, called the Berward that it may seeme to seed in December: the second sowing is in Januarie: the last in March. In Germanye they use to sowe them in March or Apill, chieely for fodder for their Cattell. To sow Laxes, and as Picnic saith Weanes, in not broken up ground without losse, is a great peice of husbandry: they sowne in June, at which time they are very good to scoure houses: it is good to lay them up in the coo, and to kepe them to serue cattell withall. Laxes & Weanes make a good medley sowne together. Lupinus in Latine, in Greekke ^{λοπίνας}, in Italian ^{Lupino}, and French, almost as in latine, in Spanish Alfarrobo, in Dutch Roomiche Soone, is a Pulse having one onely stalke, the least tagged in fine divisions like a starre, the flower white, the coults tagged, and numbered about, having within them fine soft smooth hair, broad, and red, the leaves thereof do fall. This pulse, quiete least trouble and is of small price, and it most helpeth the ground of any thing that is sowne: for there can be no better manuring for barren Vineyards and Cane-fields then this, which either upon barren ground prospereth, or kept in the corner endureth a wonderfull while: being sdden and laid in water, it feedeth men in winter very well: and in time of dearthe (as Columells saith) serveth men to allay the hungerit prospereth in swampy and grabbelly groundes. in the least land that may be: neither loueth it to haue any labour bestowed upon it, nor indigeth the greevaille of the ground. How fruitfull it is, as if it be cast among Barleys and Winters, yet will it come and prosper: it refreshest both harrowing and raking, and is not strangled with weedes, but killeth the weedes about it. If young

be wanting to me to the ground withall, this serveth the turne above all other; for being sowed, and turned in with the plow, it serveth the turne in stead of us: ging: it is sowed timeliest of all other, and reaped last: it is sowed before all other Pulse, a little after Harvest: cover it how slenderly you will, it careth not (an excellent god seide so; an evill husband) yet desreth it the warmth of Autumnne, that it may be well roote before winter come, for otherwise the cold is hurtfull unto it. It flowereth thrise, first in May, then againe in June, and last in July: after every flowing it beareth his cod. Before it flowereth, they use to put in cattell: for whereas they will seide upon all other grasse or herbes, only this so; the bitternes thereof while it is greene, they leave untouched. Being dried, it serveth so; sustenance both of man and beast; to cattell it is giben medled with chaffs, and so; bread for mans use, it is mingled with wheat flourie, or barley flourie: it is very god to keepe it in a smoky loft, for if it lye any thing moist, it is eaten of little wormes, and thereby spoyleth. The leafe keepeth a certaine course & turneth with the sunne, whereby it sheweth ever to the husbandmā, even in cloudy weather, what time of the day it is.

Fenugreek Fenum grecum in Latine, in French Fenegres, & Fenigent, in Italian Fenigracco, in Spanish Alholua, in Dutch sometime by the latine name, & commonly Rohorne, and Lockshorne: commeth up with a small stalke, the leafe like a thistleated grasse, it is sowed well in a slender harren ground, you must take hied you plow it thicke, and not very deepe, for if the seed be covered above fourteene fingers thicke, it will very hardly grow. Therefor the ground must be tild with small plowes, and the seed presently covered with hales. There are two sortes of it, the one called of the common people Siliqua or Cod which they sow for Hodder in September, the other in January, or the beginning of February: when they sow it for seed, it flowereth in June and July, when also it beareth his Cod, but the seide is not ripe till August: it is dressed to be eaten after the other of Lupins, with vinegare, water, & salt, same pot to a little stye: it is used both for Hodder, & divers other uses. Furthermore of Pulse called of Gellius, Legamentis, we haue these generall rules, that they all beare cods & haue single roots every one, except the Weane, the Chichy growing depest. The stalke of

the beane and the Lupine is also single, the other are all full of banches and leade. Lips, and all hellow. All Pulse for the most part, are to be sowed in the spring, and require very iich ground, except the Lupine, that t.ies not wh. he liez, they are all sown in the enclose of the Pone, except Pease: if they be watered before their sowing, they prospere the better: they are spadly to be gathered when they be ripe, for they addre ly hotter, they will endure longest, being gathered in the change of the Pone. It is much to be regarded whether you will haue or sell them, for the seeds in the inclose of the Pone doe ware greater: there are that preserue them in eithen vessells, strewing ashes under them, and sprinkling them with Vineger: some use ashes alone, others use to sprinkle them with Verge, wine vineger, as I have said of the lentill. Moreover, the Oats have willed to mingle with the dung a little saltpeter when you sow them, whereby they shall the better sathe & be the tenderer, and if they be not presently tender, they will to cast into the pot a little Mustardsed, which will make them straightway well. Theophr. addes divers things beside, which were too long to tell.

R I G O. Is it needfull for evert husbandman to sow all these Graine and Pulse in his ground?

CONO. No: but as I sayd before, in speaking of ground and seed, you must chieflie sow such as best agree with the nature of your ground: howbeit, there are some of them that refuse no ground. There are certaine of them, as Varro saith, that are not sowed for present necessity, but for other afterturnes. And others againe that are of necessity to be sown, as corn for men & fodder for Cattell: of which must speciall care be had, that there be no want of them, without which wee cannot live: as Rye, Dates, and Buck. Lupines, and certaine Pulse else, for fodder, refuse no ground, though it be never so barren. Besides, when as the husbandman must not onely haue a care of providing such as serue for the sustenance of man, but also for such as fodder for serue for the feeding of poore Cattell, without which the Cattell. ground cannot be husbanded: wherefore must he sow Pulse for the use of man and beast, and fodder in more abundance for the sustenance of beasts. Amongst all sorte of Fodder, that is counted for the chiefe and the best, which the people of olde

66 The first Booke, entreating

Medica.

time, and the Italiens at this day call Medica, some call it
Trisoile, the Frenchmen call it Grandtelle, the Spaniards
Alfals, others call it Burgundie grasse, because it was brought
in by the Burgundians, it is now also come into Germanie,
and there called Welsholken. Plinic wryteth, that it was
brought by the Romans, out of Media into Italy, differing almost
nothing from Trisolly, or the cleaneed grasse: but that it is greater,
higher, and ranker, for in stalke, leafe, and flowre, it is all one: it groweth altogether bushing in leaues. In the top of the
stalke it putteth forth short coddes, whereto like hornes indented
about, and hauing as it were, little prickles, whereto is the
seed shaped like a Pome, and growing to the Cod in bignes as
the lentill, which being chawed, tasteth like Pease: every codde
hath his seed, it requireth a fat ground without stones, full of
myce & rich: in many places it cometh not up, in others it spring-
eth very thicke. Varro giveth charge, that it be not sowed in
too dry a ground or tickle, but in god and well seasoned. Plinic
would have the ground be dry and very rich. Columella biddeth,
that the field, where this Medica shall be sowne, should be broken
up about October, and so to lie mellowing all the winter, and
then to stirre it in February, and the stones cast out, to harrow
it well, and after in March to order it garden-wise, casting it
into beds, every bed ten foot broad, and fiftie in length, so that
they may be easily watred, and of every side well weedied: then
laying on god old boymg, let it lie till Aprill, and at the end of
Aprill sow it in such proportion, as every handfull of seed may
occupie five foot in breadth, and ten in length, and couer the seed
out al hand, raking them with wooden rakes, for the Sunne
will scorne burne them. After it is sowne, that it come up an
inch in height, you must beware you touch not the ground with
any iron instrument, but eyther with your fingers, or with
Makes of wood: weedie it well from all other nosyome things,
otherwise it will grow wilde and turne to pasture. Let the first
harvest be long deferred, to the end he may somewhat shew his
seeds: at other times you may mow it as soone as you will,
and give it your Cattle. Such as are shiffull in husbandry, doe
say, that if you mingle Dates with the seed of Medica, and sow
them, they will cause them to stroke very well: it is sowne in
Aprill

Apill, or later, in May, to scape the frosts, and the seed is cast in like sort as Wheat is. When it beginneth to branch, all other waedes must be waded away, and being thus ordered, you may mow it six times a yere. It flowreth six times, or at the least five times, so it be not cut. When you have mowed it, water it well, and as it springeth, wade it againe. And thus as I sayd, you may mow it six times a yere, and it shall thus continue ten yeres together, it enriceth the ground, all poore and sieble Cattell are sone brought up with it, it likewise healeth Cattle that are diseased, but when it first springeth, till cattle be acquainted with it, you must give them but little at once, least the strangenesse of the food hurt them, for it maketh them to swell, and breedeth great abundance of blood. Columella wryteth, that one acre of it will well finde thare Yards a yere. In some Countries this hearbe doth grow in great plentie in every Meadow, either of the nature of the ground, or through the disposition of the Heavens, & sometimes the celiches of that which hath boorne long agoe sovire doth yericly spring of the seed that falleth, & overgrowne with Grass or waedes, doth change into Meadow. I see no cause but that it may grow of it selfe, but that perhaps such plants as are brought out of strange Countries require sowynge & dressing: it is best to be mowed when it beginneth to flower, for it must not be suffered to seed, whereby the Fodder shall bee the better: which being well laid up, will continue in goodness thare yeres, to the great profit of the grauer, so as I have sayd before, there can be no better Fodder devised for Cattell, wherewith they will better feede, and sooner rise. The next in goodnes to this Medicis Cytisus, wonderfully as Plinius wryteth, commended of Aristomachus, and as Virgill saith, a good fodder for Shepe, and being drye, a delightfull food to Swine: it may be mowed sundry times in the yere, to the great commoditie of the husbandman: a little wherof doth sone fide up cattle, neither is there any other grasse that yieldeth either more abundance or better milke, the most soveraigne medicine for the sicknesse of Cattell that may be: beside, the Philosophers promise, that Wires will never failles that haue this grasse growing neare them: therefore it is necessary to haue your ground stroken with it, as the thing

Cytisus.

that best serveth for Poultrie and Cattell: the leanes and
steves ate to be given to leane and drooping Pullen: some call
it Telliten, some Tresfoile, some great Melilot, the Romans
call it Trifolium, great trasse; it is a plant all hairy and whi-
tish, as Rhamnus is, having banches halfe a yard long and
more, whereupon groweth leaves like unto Fenigrake or Cla-
vor, but something lesse, having a rising crest in the midst of
them. This plant was first found in the Iland Cythno, and
from thence spread throughout the Cyclads, and so to Greece,
whereby the store of Chese came to be great: neither is there
any countrey at this day, where they may not have great plen-
ty (as Columells saith) of this shrub. In Italy it groweth about
the enclosers of vineyards, it shinketh neithet for heat, cold,
frost nor snow: it requireth good ground, if the weather be very
dry, it must be watered, and when it first springs well harrowed:
after three yeres, you may cut it downe, and give it your Cat-
tell. Varro would have it sowne in well ordred ground, as the
seed of Coleworts should be, and after remov'd and set a scot
and a halfe asunder, or else to be set of the slips. The time of
sowing of Cytisus is either in Autumne, or in the spring, in
ground well plowed and layed out in beds: if you want the seed,
you may take the slips, so that you set them some scot asunder,
and a banke cast about them with earth well dunged; you
may also set them before September, when they will very well
grow and abide the cold in winter, it lasteth but three yeres.
Columella hath two kindes of Cytisus, one wilde the other of
the garden. The wilde both with his claspers seide very well:
it windeth about and kils his neighbours as the Iule doth: it
is found in Coze fields, specially amongst Barly, the flow-
ertheads is like the flower of Pease, the lease, if it be bruised,
smellethe like rocket and being champed in the mouth, it tasteth
like Chiche, or Pease. There is another kind of Fodder among
the plants,unknowne to the old writers, very good to fad both
Cattell and Poultrie. I know not whether it be knowne in
other Countries beside Germanie, the common people call it
Spuric, or Sperie: it hath a stalke a scote in height and more,
busheth forth in many banches, it bath a white flower without
any lease; the flower endeth in little knobs as Flax hath, con-
taining

taining in them a very little sēde like Rape sēd. They are much deceived that take it for Cyrius, when that (as Diſcorides sayth) hath leaues like Fenugrāke, and this is altogether without leaues : neither is the sēde any thing like, though the ſe be almost one. The beſt milke and butter in Germanie, commeth of this ſeeding : wherefore it is eſteemed almoſt as god as Barley, or other graine : the ſtraw is better then any Hay : the chaffe ſeedeth as well as any graines: the ſēd ſeedeth pigeons and Poultie in winter paſſing well : it is ſowned in ſandie and light grounds all the Sommer long, and ſome ſow it in ſpring time with Dates, for the ſeed ſake : in Autumne and Harveſt time it is ſowned to ſeede Cattell : it is profitable for Husbandmen that diwell in sandy and grateley Countries, wherefore they ſhould never be without god ſtoze of it, for hemmes, Wies, Goates, Sheepe, Dren, and all kinde of Cat-tell delight very muſh in it: now remaineth the ſowing of Flare and Hempe.

R I G O. I looke for it.

C O N O. These although they be not to be received in the number of Cozne nor Pulse, Fodder nor Hearbs, yet is there great account to be made of them with the husbandmans things, without which no house can be furnished, nor man well apparelled; which being beaten to a ſoftnes, ſerveth for webs of linnen, and twisting of Cords; and moſe, of this ſo little a ſēd doth ſpring that, which (as Plinie ſayth) carrieth the whole world hither and thither, that bringeth Egypt to Italy, and carrieth us from Cales to Ostia in 7. daies. Linum in Latine: in Grāke, Lin, in Italian and Spānij, Lino: in French Dulin: in Dutch almoſt like, ſaving that they call the ſēd Lin. And the plant Flax, is a very common heatbe, wherewith the women are ſet a Flaxe-worke: it hath a ſlender ſtakke, not muſh unlike to Sperry, but that it groweth higher a little, and bigger, with narrow leaues, & long blew flowoes in the top, which falling away, leaveth behind them little round knobs as big as a peafe, wherin are incloſed yellow ſeeds: it delighteth in rich ground, & ſomewhat moist: ſome ſow it in barren ground, after once plowing, it is ſowne in the ſpring, and gathered in ſummer. In Gelderland and Guliche, where there is great ſtoze of it, they ſow it about the begin-ning

ning of May: there are againe that obserue thys seasons for sowing of it, as the weathyr shall fall out, for it requireth raine and myghtyre: the ripenesse of it is perceyved by the waxing yellow, & swelling of the knops that hold the seede, being then plucked up, and made in little bundles, it is dyed in the sunne, the rotes standing upward, that the seede may fall out. Some use againe to cary off the knops with an yron combe calld a Riplecombe, and drying them in the sunne to gather the seede. The bundles afterwards are laid in water heated with the sunne, with some waight upon them to keepe them downe, the rinde waxing loose, sheweth whyn they haue bene stiped enough. Then the bundles uncoosed and dried in the sunne, are first byked upon wooden shakes, then heckled upon the hecklecombs, till that which is most fine be separated from that which is most course: the more byong it suffereth, the better doth it prove: the towne is severed from the flaxe, and appointed for his use, so are they severally spun upon the distasse, made up in bottomes, and sent to the weavers, whereof are woven webs, to the great commoditie of all men. Last of all, the web is laid out in the hot sunne, and sprinckled with water, whereby it is brought to a passing whitenesse. It may be remembred, that not long since the women of Germanie knew no costlier attyeze. The best flaxe that is at this day, is brought from Muscovia, Livonia, and those Countries, far excelling ours in heighth and goodnessse. Hempe, in latine is Cannabis, in Greke κανναβις, in Italian, Canabe, in Spanish Cannamo, in French Chamura, and in Dutch Haveph; is a plant of the Hebrew kinde, having a very strong savor: it groweth with a single stalke, and many times to such a heighth, that it matcheth with indifferent trees: it is of great necessarie for the use of man, and serveth both for making of Canbars, and straming of ropes: the stalke hath many knots, out of which procedeth branches with narrow leaves indented and sharpe. Dioscorides describeth both the wilde Hempe, and the garden Hempe, to have leaves like the Ashe, hollow stalkes, a stinking sabor, and round seed. There are two kinds of it, the Male, that is without flower, and beareth a siede of sundry colours: and the Female, that, to recompence her barrennesse, doth yeld a white flower. It is solued

sown in Gardens, Orchards, or other good ground, (as Plinie would have it) after a Southwest wind, with us it is sowne in the end of Aprill, so; it can not away with cold: some sow it at the rising of the Star, called the Berward, which is at the end of February, or the beginning of March: it loveth rich ground, well dunged and watered, and deepe plowed: it is naughtie sowing of it in rawne weather, the thicker you sow it, the tenderer it will be, and therefore many times it is sowne thrise, though some there be that appoint to every foot square sixe seeds. The female, or firble Hempe is first pulled up, afterwards the spale, or the carle, when his seede is ripe, is plucked up, and made up in bundles, layd in the sunne so; thre or foure dayes, and after is cast into the water, with weight laide upon him so; eight or ten dayes, till he be sufficiently watered, and as flaxe, till the rinde waxe loose: then taken out, it is dyed with the sunne, and after broken in the brake, and then combed and hacked so; Parue and Popes. Of Hempe, are made Cables, Co:ds, Nets, and Nailes so; Shippes, garments so; Lashers, Shirts, and Shetes: the shales or stalkes serve so; heating of Ovens, or kindling of fires.

R I G O. In the Countrey of Culicke, and some partes of France, I remember an hearbe planted of the common people with great diligence, that serveth as they say so; Diers.

C O N O. You say true, that hearbe, Caesar in his Commentaries of the warres of Fraunce, called Glastum, in Greek *Ιατρικη*, in Italian Goado, in Spanish Pastel, in French Gudum and Guelde, in Dutch Weyt: the diars doe use it, and with them it is greatly esteemed, and great gaine ariseth therof unto the people of Gererland, Julies and Turin, and divers Countries else: the leaves as Plinie writeth, are like unto Dock leaves. Bioscorides writeth of two kinds, the wild & the Garden woade, saying, the Garden woade which Diers use, have leaves like Plantine, but something thicker, and the wilde leaves like Lintill, with yellow flowers: with this hearbe Caesar saith, the people of England, were wont to paint their faces and bodies, to seeme more terrible to their enemies: it requireth like sowing and soile as Wheate doth: but it is a great soaker of the ground, and much hurteth it: it would have a very rich and

Woods.

a fat ground, and well digged : so the ground were better to be turned up with spades then with plowes so; the sowing of this plant, and it must be very well weeded. It is sowed in Gelderland in Aprill, and after the common peoples rule, in Easter weeke : at the first fallowing they marrle the ground, after sowing it : you must be very haedfull in the weeding of it. When it is growen a handful hye & more, they suffer it not to flowre, but with an instrument for the purpose, they cut it close by the roote, wash it, and carry it to the Mill, and suffering it to grow againe, they cut it thre or four times, and so leave it to seade. The greene hearbe they grinde in spilles like Apple Pils; pressing it till they get out all the iuice thereof, then roule they it up with their hands in round balles, and so lay it upon baxded floore to be dyed.

R I G O. You have greatly delighted me, in describing unto me the order of sowing of sedes, without which, not enely the people of the Countey, but also the Courtier and Citizen are not able to live: my desire is now to understand the order of harvest, the Country mans long looked-for time, and the reward of all his toyle.

Harvest.

C O N O. I will procede in the accomplishing of your request. When the corne is ripe, before it be scorched with the great heat of the sunne (which is most extreame at the rising of the lesser dog) it is to be cut downe out of hand: so delay herein is dangerous. First, because that birds, and other vermine will devoure it: and againe, both the Czaine and the Care, the toppe and the straw being brittle and over dry, will scorne fall to the ground: if storme or tempest chance to arise, the greatest part thereof will to the ground, and therefore it must not be lingred, but when it doth luke yellow in every place, and before that the graine be thorow hard, when they come to luke reddish, you must then have it in, that it may rather ware in the barne, then in the field. Experience teacheth, that if it be cut downe in due time, the sede will grow in fulnesse as it lyeth in the barne: for the Hoope increasing, the corne growes greater: at the change you must gather such sede as you would shoulde be least faultie. Varro saith, that the best time for harvest, is betwixt the sunne day, and the Dog dayes;

dayes : for the Corne they say, doth ryse in the blade fiftene dayes, flowreth fiftene dayes, and ripeth in fiftene dayes, Amongst graine and Pulse, the first that is to be gathered, is Rape ^{Rape Hars-} sidae. And because the seide, when the corde beginneth to ^{vest.} ware yellow, declareth ripenesse, it must be gathered out of hand : and sith the seide will easily scatter, it must be laid up, ther in plaine smooth places in the field, or upon Canvasse : and if it be presently to be carried, the Raspine or Cart must be laded with shutes, least with jogging and trotting of the carriage, the seide fall thazow. You must take god hede as well herein, as in other Pulse, that you prevent the rayne, so the rayne falling, the corde doe open. As soone as your Rape seide is off, if the ground be plained, you may sain Bucke, or Branke as they callit : so that of one pace of ground in one parte, you may make two Barkestow ^{ter} ^{Harvest} ^{for Win-} ^{ter Barley.} Counties, followeth the harvest of Winter Barley, which is to Harvest be dispatched before the seide (the Cares being over-riued) doe fall, for they have not huskes to contayne them as Wheat hath, and the cares being brittle, will soon fall: yet some thinke it best to let the Barley lie a while in the field, wherevpon they think the Graine will ware the greater. Then followeth the Hemp ^{Hemp har-} harvest. Rye and ^{Wheat har-} ^{vest.} ^{ter} ^{Harvest} ^{as Plinie saith} it is better to have in harvest two dayes to sone, then three daies to late. In Rye there is not such feare in scattering as in Wheat, which as soone as it is ripe, will shed with every winde. Wherefore god hede must be taken, that you linger not with Wheat after it is ripe : although Plinie affirmyth, that Wheat will have greater yald when it stands long : but surely desertyng of it is dangerous, as well for the debouring of birds and vermine, as for shattering and falling of the seide through stroake and weather: as the profe was saine in the great iuryno that were in the yere of our redemption, 1567. When followeth the harvest of Pease, Beans, Vares, Lentils, according as they are timely folwed, wherewin you must take heed, as I warrned you before in Rape ^{ter} ^{Harvest} ^{that they lie not alwaynes in the raine : for if they doe,} ^{they}

The har-
vest of all
other corne
and pulse.

They will open and lose their sea. Lust of all commeth the Har-
vest of the other Sommer seide, as of Barley, Pannicle, Millet,
and Dates. It is found by experience, that caine is good for
Dates after they be done; so it causeth them to swell and to
be bigger, and to that end they are left in the field many times
two or three weekes after they be done.

R. b. v. What other have you in your reaping?

Divers
sorts of
reaping.

C. v. There are divers sortes of reaping, according to the
manner of every Country. Some with scythes, which differ
also as the work required. In this Country we use three sorts
of to ne scythes, so either we have a scithe like a scythe, which
holden in the right hand they cut the straw close by the ground,
and have in the left hand a long skeare, wherewith they pull
together that they have cut, and lay it in heapes: and in this
sort will heat and die, and stich Craine as hath the stridell
strawes reaped. In other places as in Iude, where the ground
being swetish, the Corne groweth higher and ranker, there
they hold their left handfull of Corne, and with the right hand
with twoe scythes they cut it, leaving the straw under their
hands long to help the ground to shall. In other places they
use a greater scithe with a long shank, and fenced with a crow-
ked frame of stiches, wherewith with both their hands they cut
downe the Corne, and with that they mow the higher lots of
Corne. Marro and Columell, and other doe tell of sundry other
sorts of reaping. Palladius tracheth besides the labour of men,
a shorter way to be done with an Oxe, that shall in short time
cut downe all that groweth, which was wont to bee used in
Iamnes. The devile was a low hinde of Catt with a couple
of wheales, and the Faut attred with sharp scythes, which
forced by the beast through the Corne, did cut downe all before
it. This triche might be used in leuell and champion Coun-
tries: but with us it would make but ill-favoured worke. In
reaping, you must regard to goe with the wind: for if you
mooke against the wind, it will be hurtfull, as Xenophon saith,
both to your eyes and your hand. If the straw be but short,
you must goe nearer the ground, if it be long, you may put
your scythes to the mucke to bischew it the sooner, and to
make it thicke the better; and the stridell upon the ground must
either

either according to Virgils rule be burnt, or cast upon the ground, so; the bettering of the land. Some preferre that which is longest, to thatch Barns, Stables, and Country Cottages withall. And where Hay is scant, it serveth so; covering of Cattell: for Barley straw is a food that Bullachess like well, and beside, all kind of straw is good to litter withall. When the Coone is doone, it is presently to be bound in sheaves: al- though Barley, Oates, and other Coone and Pulse is made up in Tops and Ricles, but not without hurt and hazard. The Coone being cut, is not to be had into the Barne presently, but to be let dry, according to the nature of every Chaine and Pulse: for if it be carried in before it be thoroughly dry, it excep- teth and rottest. Oates and Barley, are longest left abroad, as also Lentilles, Pease and pulse, because they are longest in drying. Wheat may shortly be carried, if it be not mingled with too many weeds that hinder the drying of it. When Barkeless is in, the ground must not be ploughed, but by plowing
kill the winter, and to make all the winter for the next sowing, after Hars.
The Coone cut nothing and die, so to be laid either in Barres,
Hobles, or stacks; and after in Winter, to be drawn out with
Beasnes, or theresh, and with Hales, and to be cleaned with
Rammes, in the same ordene as above. R. G. O. I see you have my charge: Barres, what otherwise
serve you in the building of them? and what sort of
C. O. You must so set your Barres, that the Coone may The Barres,
be well brought into it, and fairely clost onevery side, leav-
ing open a space say two worts, a foyntaine, and a backe bosome;
but so, as neither of them open to the West, but rather North
and East, and at both sides of the Barre before your Coone in
several tales and rows, so that you may easily conte the very
one at your pleasure. And though the Coone be long upon
littered in the flores, yet let a space be left in the midle, that
may be open to the very top, that you may fetch what sort you
list to be therfled. In some places they have a pully in the
midle, wherewith they draw up the Coone to the very rafters
of the house. In Holland they build their cotes Barres, but all
Doors and windows are made of hanging stones upon poles,
the bottome panes and windowes, they make brightened, and let
downe as they list.

R. G. O.

R 1 G O. Those kinde of Barres they say, are not so subject to spise and Rats, nor so chargeable as the other.

C O M O. Howsoeuer the Barre be, you must place it as high as you may, least the Coyn bee spoyle with moystice or damps: some thinke it better for them to be thatched then tyed, the largenesse must be according to the greatnessse of your occupying. Some, to the end Cats and Wæzels may the better come by, they doe vault the floore with briches, and laying rafters theron, doe lay on their Coyn. The floore must be layne and smoothe made, so as the Coyn may be well threshed or trodden out. Columells would have the floore faire paved with flint or stone, wherby the Coyn will the sooner be threshed, and the floore not hurt with beating and trampling of Men, and when it is san'd or winnowed, it will not be full of gravell and dust, as the earthen floores yield. But we content our selfes with our earthen floores well made, and of good earth, mixed with a little Chaffe, and the groundes of Oyle; for this preventeth the Coyn from spise and Creases. You must make it very even and leuell, and after it is mingled with Chaffe, let it be well trodden, & so suffit to cover. You must keepe also from it Beastes, and Poultrie, which with trampling and scraping will make it ragged and uneuen. Wher the floore is dry, the Coyn laid on it, beaten out with Mayles, and cleaneed with Fans, though in some place they rather like to tread it out with Olen, and to winnow it after the old fashion, with the winde.

R 1 G O. Well said, when you have thus threshed your coyn, what iustice haue you to keape it from me?

C O M O. The Garret or Coyn is often wherin your Coyn thus threshed and cleaneed shall be layd, must stand high, that they may be blowne through with the Easterne and Northerne winds, to which no moystice from the places adjoyning must be suffered to come. So the quarters of the heauen that are coldest, by reason, doe both preferre Coyn the longest. In Spaine and Apulia, being hot Countries, the wind is not only let in on the sides, by Windows, but also at the bottome by grates. Some againe preferre it in builds under the ground, where the day赤日
both chearefull fruitefull syrpath brought such as Nancie Taith, in Spayne and Cartagene: and in our dayes such as the

of Earable-ground and Tillage.

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keepe both Wine and Graine in such vaults. In Countries that are wet and watrish, it is better to make them in Garrets, as high as may be, having god regard that it be well walled and floored. Moreover, where as Corne is subject to Wibells and Wermine, except it be very safely laid up, it will soon be consumed: therefore you must make with Clay, mingled in stead of Straw, with haye, then overcast it within and without with white Potters Clay: last of all, stope the rotes and leaves of wilde Cucumbers in water two dayes, and with that Water, and Lime, and Sand, make Plaster, and wash therewithall the walles within: albeit Pline counts Lime as hurtfull a thing as may be for Corne, some mingle with Lime the Vicine of Cattell, as a thing that will destry Wibells, or the leaves of Houselake, or Wormewood, or Hoppes: but specially if you have it, there is nothing so good to destroy all such Wermine, as the dredges and bottome of Dyle: some use in the stede thereof, the pickle of Herrings. Having in this sort orderd their seedlings, and their flowers being dyie, they suppose that no hurtfull worme shall annoy whatsoeuer Corne they lay in them. But because the Garner or Hutch is the most especiall thing for the preseruation of graine, you shall understand that the best Garner is made of plaster of paris mixed with tilesherd and other small stone to raise the walls up a god height, and to smooth them both within and without with plaster, so as no ston may be perceived, and the bottome being of the same substance to be smoothed also; if you scatter chaffe amongst the graine it is a greate preseruer, others cover the graine with wormewood, and it not onely destroys weavells, but kēpes away both Ratis & Nīce. Some lay under their Corne, Flæwoxt: others thinke it an assured remedy, if they be often fanned and winnowed, and thereby couled: but Columella thinkes it untrue, and that by this meane the Wermine shall not onely be not driven out, but they shall be dispersed throughout all the Corne, which if they otherwise be left alone, will meddle with no more then the outward parts, for a handberch depth within, there never haues any Wibells, and therefore he thinkes it better to let that alone

F

that

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that is already corrupted, and will goe no further, then with farther medling to marre all: for it is an easie matter, whensover you need to occupy it, to take away that is tainted, and to use the rest. But for all this, experience teacheth us, that there is not so good a remedy to destroy the ~~W~~ yuel, as is the often sowing and winnowing in Summer. After the first two yeres, they hold opinion, they will not meddle with Coyne: but I weary you with carrying you too much about; and if it please you, we will returne home.

R I C O. If it be for your ease so to do: otherwise there can be no greater pleasure to me, then walking abroad to heare you

Of Pasture talkē of husbandry. Are these that I see your pastures, where
and Med-
dow.

C O N O. They are so; I lay all my pastures severall, for every
kinde of Cattell to be by himselfe: in the hithermost that you
see, are my Cattell that I sat: in the next are my Horses, my
Mares, and my Colts: in the next are my young brade, Peare-
lings, and Twoparelings. The Meddowes that you see in
yonder Valley, lye all to be plowed. Here next to my house, are
my bucklings, that are brought to their Dams to sucke thise
a day, and therfore ought to be neare: howbeit, such as fide
farre off, must diligently and daily be looked to, for feare of
diseases.

R I C O. I pray you then take the paines to describe me the
ordering of Pastures and Meddowes, when as there seemeth to
be a great affinitie betwixt them and Coyne ground, and be-
cause they are sometimes also to be plowed, me thinketh this
part remaineth to be spoken of.

C O N O. With all my heart, I will satisfie your desire in
as much as I am able: and indeed, since I have all this while
spoken of Coyne ground, it is not out of order to tell you my
minde of pasture: and although Cato in some places doth give
the preeminence to the Vineyard: yet other old writers doe
not of all preferre pastures, as the ground that requireth
least to doe about it: and therfore they were called, as Varro
saith, *Prati*, because they were *Prata*, alway in readines, and
needed neither great charge nor labour, nor are in danger of
Ruynes or tempests, as other kinde of ground is, except such
parcels

parcels as lie nere Rivers and Islands, which are sometimes overflowed: and that discommode is sufficiently recompensed with the fatnesse that the water leaveth behinde it, which enricheth the ground, and makes it the better yearly to yeld his graine either in pasture or Meadow. The pastures with us doe commonly serue both for pasture or Meadow when we list, specially in such places where the ground is rich and dry, which they had rather to emploie to pasture, because with dunging of Cattell, it warereth alwayes the better, whereas with continual bearing of Hay, it hath growne to be mossie and naught: but where the ground is alwaies wet and marshy, there it is better to let it lie for Meadow. Columella maketh two kinds of pasture ground, wherof one is alwayes dry, the other overflowed. The god and rich ground hath no neede of overflowing, the Hay being much better that groweth of the selue goodness of the ground, then that which is forced by waters: which sometime notwithstanding is needfull, if the barrenesse of the ground requireth: for in bad and naughty ground, god Meadow may be made, if it lie to be overflosune: but then must the ground neither lie hollow, nor in hills, least the one of them keepe the water apace it too long, and the other presently let it forth againe. Wherefore lyeth the ground best, which lieth levelle, which suffereth not the water to remaine very long, nor a boideith for some. If in such ground it chauace to stand over-long, it may be avoided with water streame at your pleasure: for both overplus, and the want of water are a like hurtfull unto Meadowes. It is very handsome, where rare and barrant ground lieth so by the River, as the water may be let in by trenches when you list: in fine, the occupying of Barke ground requirites more care then tractable. First, that bins suffer not Bulshes, Thornes, nor great Weedes, to overspread them, but to desroot some of them, as Brambles, Briars, Bulrushes, and hedges in the end of Summer, and the other that be Sommer weedes, as Honewhistell, and all other Whistells, in the Sparyng. You must take heed of Swines, that spoile and turne up the ground ill-famously, and all other Cattell, except it be in hard and dry weather,

weather, soz otherwise they galt and marre the ground with the
dispe stinking of their feet, treading in the Crasse, and breaking
of the Rootes. The bad and barren grounds are to be helped
with dung in the winter, specially in February, the stones
increasing, and the stones, sticks, and such baggage as lye
scattered abroad, are to be thowtne out sooner, or later as the
ground is. There are some Medowes that with long lying, are
over growne with Spisse, which the old husbands were wont
to remedy with casting of certayne seeds abroad, with laying
on of Dung, specially Pigeons dung; but nothing is so good for
this purpose, as often to cast Ashes upon it, soz that destroyeth
Spisse out of hand. Notwithstanding these are but trouble-
some remedies. The best and certainest is to plow it: soz the
ground after his long rest, will beare goodly Corne.
But after you have plowed it, it will scarce recover his old e-
state againe for pasture & medow in these or soure yeres. Wher-
you meane to let your ground lie againe for medow or pasture,
your best is to sowe it with Dates, and to harrow the ground
even and leuell, and to hury out all the stones and such things
as may hurt the saythe: soz Dates is a great breeder of grasse.
Some doe cast Hayleado, gathered from the Hay-loft or the
Rushes, over the ground before they harrow it. Others againe,
when their Medowes haue lien long, sow Beanes upon them,
or Rape-seeds, or Oyleet, and the yere after Wheate: and the
third yere let them lie againe for Medow or pasture. You
must beware, that while the ground is loose and soft, poulet not
in the water, for the force of the water will wash away the earth
from the sides of the Challe, and will not suffer them to grow
together; neither must you (for the like danger) suffer Cattell to
come upon it, except in the second yere Goates, or Shepe or such
like, after you have mowned it, and that is the season he very day,
Wherfore you may put on your greater sort of Cattell in
gome, and if the ground be hilly and baraine, you may dung the
higher part in February, as I said before, casting on it soule
that comes to it, will carry downe some part of the dethnesse to
the bottome, as I saye before, when I speake of the manuring of
earable ground. But if you will lay in new ground for spawckes,
and

and that you may have your choise, take such as is rich, dewy, levell, or a little hanging, or choose such a valley, where the water can neither lye long, nor runne away to salt: neither is the ranke Grass always a signe of good ground: for what godlier Grass is there, sayth Plinie, then is in Germanie, and yet you shall there have sand within a little of the upper part. Neither is it alway a watry ground where the Grass growes high, for the very mountaines in Sycherland yeld great and high grasse for Cattell. The pastures that lyes by the Lakes of Dumone in Austry and Hungarie are but slender, nor about the Rhine, specially at his falling into the sea about Holland, as likewise in Friseland and Flanders. Caesar Vopiscus. The fields of Rostius were the principall of Italy, where the Grass would be so sone growne, as it would hide a stalle in a day: You may make good Meadowes of any ground, so it may be watered. Your Meadowes are to be purged in September and October, and to be rid of all bushes, brambles, and great soule Woods, & al things else that annoy them: then after that it hath often bene stirred, and with many times plowing made fine, the stones cast away, and the clods in every place broken, you must dung it well with fresh dung, the bone encreasing. Let them be kept from gulling and trampling of Cattell. The mould-hills and dunging of horse and bullockes, must with your spade be cast abroad, which if they remaine, would rather be harbours of Ants and such like vermine, or else breeders of hurtfull and unprofitable wiedes; your Meadowes must be laid in towards March, and kept from Cattell and made very cleane: if they be not rich, they must be mended with dung, which must be laid on the bone encreasing: and the newer the dung be, the better it is, and the more grasse it makes: which must be laid upon the top of the highest of the ground, that the goodness may runne to the bottome. The best herbe for pasture or Meadow, is the Tresoile or Claver: the next is sweet Grass: the worst as Plinie saith, is Rushes, Heath, and Rosemary.

R I C O. How shall I know when the Grass is ripe, and ready to be cut?

C O N O. The time of cutting of it, is when the Went beginneth to fade & have stiffe, and before it wither. Cato bids not to

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mow your Grassie with the latiss, but before the said be ripe; It is best cut downe before it wither, where by you shall have both more, and better Hay of it. Some, where they may overflow it, do water it a day before they cut it, it cutteth better after a dewie evening.

R I C O. Doe you cut grasse in the like sort as you do Cornes?

C O N O. Almost in the like sort, some doe it in short withes, mowing it with one hand: but we here doe use the common great with, mowing with both our hands, as I said before, that Dates, and Barley, and such other like Corne was mowed, which withes we use to sharpe with Whetstones, or instruments of wood dressed with sand. The Grassie being cut, you are to consider of what nature the grasse is, whether very course and full of strong wades, thicke leathes and great staves of peny-grasse, or else exceeding fine and boyd of any thing whiche affreth much withering; If it be of the first kind, then after the mowing you shall first ted it, then raise it into little grasse Cockes as bigge as small Molehills, after sunne them and make them up againe, then spread them; and after full dryng put them into windysives, so into greater Cockes, then breake those open, and after they haue received the strengthe of the Sunne, then put thys or four Cockes into one, and lastly leave them into the Warne; if it be of the latter kind, then you shall only after the mowing, first ted it, then turne it, after put it into windysives and cocke it into great Cockes, where after it hath drouen twelue or fourteene boordes, you may with fastis carry it into the Warne; so: any other grasse which is a meane betweene these two, it must be well tedded and turned in the summer, and not soone till it be dry: and if it chance to be wet with raine, it must not be turned, till the upper part be dryed. There is a measure to be used in making of it, that it be not had in too dry, nor to greene. By one sort, if the haye be dyed up, sorbettly smoky litter: the other (too greene and moist) if it be carried into the Latt, rotteth, and the vapour being over-heated, falleth on the said baneth. And if so be the raine chance to fall upon the grasse that is new cut downe, if it be not stirred, it takes not so much humus; but if it be once turned, you must still be stirring of it, otherwise it will rot.

27
The ma-
king of
Hay.

est. Wherefore the uppermost part before it be turned, must be well dried with the sunne and the winde : when it is dried, we lay it in windowes, and then make it up in Cockes, after that in spawnes, which must be sharpe and picked in the top, the better to defend it from the raine, which if it doe not fall, yet is it good so to doe, that they may sweat in the said spawnes, and digest whatsoeuer moisture is in it. And therefore good husbands doe not lay it up in their lottes till such time as it hath sweat in the field. Grass is commonly mowed twice a yere, in May or June, and againe after Harvest : the first mowing is counted the best. As soon as th^e hay is off after the first mowing, it would be overflored (if you may conveniently) to the end the after swath may be mowed in Autumn, which they call in Latine Cordon. In the Dutche of Spoleto, it is said they mow sometimes a yere, being day ground, and divers other places thrise a yere.

R I G O. If a man would buy a Farme or a Maner, in what sort shall he best doe it : for I doubt not but you haue good skill in such matters.

C O N O. Ischomachus in Xerophon, telith, what his father taught him that he shold never buy a piece of ground, that had bene skilfully or curiously husbanded before, but rather such ground as by the slothfullnesse and poverty of the Master, hath lyen untilled and neglected, and yet seemeth to be very good ground : as it is better to buy a leane house, so that he be not old, and that he hath the tokens of a good house, then a fatte house, and one that is curiously kept. A well ordered piece of land is held deere, and getteth no great encrease, and therefore is neither so pleasaunce, nor so profitable, as that which by good husbandry may be made better. Cuso would haue two thinges to be observed in buying of land : The goodness of the ground, and the wholesomenesse of the air : of which two, if either be lacking, whosoever doth buy it, he iudgeth him madde, and muste to be sent to Bedlam. for none that is well in his wittes will bestoyn cost upon barren ground, nor hazard himselfe for a little rich ground, to be alwaies subiect to pestilentiall diseases : for where a man muste deale with the Idiots, there is not only his customeodie, but his life douefull, and rather

his death then his gaine certaine. After these two principall notes, as Columella saith, Cato addes of like weight these thre that follow to be regarded: the Way, the Water, and the Neighbour. The godnesse of the way is a great matter, for it makes the Hasser have a delight to goe about it, and it is commodious for cartage, which bringeth great gaine, and little charges. Of the commoditie of water who doubteth without whose use no man is able to live? Of a mans neighbour, he would have a man have speciall regard. Hesiodus saith, *τιμη ταξος γετας*, an evill neighbour is a great mischiefe. I hate knowne divers, that for the troublesomenesse of their neighbour, have forsaken god dwelings, and changed gold for copper, because they have had false knaves to their neighbours, and quarrellers, that suffering their cattel to run at large, in every mans ground, to spoile their Corne and their Vines, would also cut downe wood, and take whatsoeuer they find, alwayes babling abont the boundes of their ground, that a man could never be in quiet so them: or else have dwelt bysome Catterpiller, Russian, or swashbuckler, that would leave no kind of mischiefe undone. Amongst all which commonly there is not so ill a neighbour, as the new upstart, that takes upon him the name of a Gentleman, who though you use him never so well, will at one time or other give you to understand from whence he comes, and make you sing with Claudio:

Esperius nihil est hamis cum surgit in ultimus.

A lewder wretch there lives not under skie,

Then Clowne that climes from base estate to hie.

As the Proverbe in Englandis, set a Bnave on horsebacke, and you shall see him shoulder a knyght: for an Ape will be an Ape, though you cloathe him in purple. Durely M. Portius would have a man shunne the neigbouchood of such, as the pestilence. I so my part am happy in this point, that I have no neighbour that I need to feare.

But since death and other calamities rido a man of them, the dwelling is not to be left, if it have other god commodities, except it be places in the Borders of sundry Countries that be subject to great sicknesse. Some commend the Swelling that hath safte wayes about it; is here some

River

Richer or god Market, whereby a man may cattie his merchandize with lesse charges. The old fellowes would never have a man place himselfe nare the high way, for pilfering of such as passe, and troublemenesse of guests, as I said before in speaking of the placing of an house. In the letting of a farme, these things are to be obserued that I speake of before, in describing of a Bailiffe of Husbandrie and his labour: that you let it to such, whose traualle and god behaviour you may be assured of, and that you regard more their god ordering of the land then the rent, which is least hurtfull, and most gainefull. For whereas the ground is well husbanded, you shall commonly have gaine, & never losse, except by unreasonablenesse of the weather, which the Civill Lawyer sayth shoulde not be any damage of the Tenant; or the invasion of the enemy, where the Tenant cannot helpe it. Besides, the Lord must not deale with his Tenant so straightly in every point, as by law he might, for his rent dayes, bargaines of wood, quitrents, or such, the rigour wherein is more troublesome, then beneficiall: neither ought wax to take every advantage, so law many times is right plaine wrong: neither must wax be too slacke on the other side, so too much gentlenesse many times makes a man the worse. And therefore it is god if the Farmer be slacke in his paiment, to make him to know it: but in no wise to be a raiser or enhauener of rents, for that discomfarts, & many times undoeth the tenant. Moreover, you must not lightly change the olde Farmer, both because of his deserfe, & that he is better acquainted with the ground then a new. L. Volusius would alwayes say, that he was in best case for his Lands that had alwayes his Tenants borne & bredde up in them, whereby the long familiaritie shoulde make them more lovingly to use themselves: for sute it is, an evill use often to change Tenants, & therfore I doe like well that order, where the land is let for the lives of the Tenant, his wife and his childe, paying a yearly rent, so that as long as he payes his rent & keepesthe reparations, it shall not be lawfull to deceiue him: for hereby the Tenant shall be provoked to order the ground with more diligence, to repaire the house, and to looke to it in all points as to his owne, bestowing many times as much as he hath upon it. This way of letting land me seemes is best,

* where

Thal-
ting of a
Farme,

wheres the ground is subiect to the sea or the River, or other danger, that the Tenant be charged with maintenance of it. And there be sute that you rather let it to one of habilitie, then to an unthrifte man, that is not able to beare it, whereby you may lose both your land and your tent. In such place as lies neare the Lord, he may occupie it by his Bayliffe, or to hal-
ves: but where it is far off, it is better to let it out for a yearly rent upon the solesai d covenants. For if you occupie it with your servant, they will either looke ill to your cattell, or your ground, or suffer things to be staine, or steale themselves, or make you be at more charges then needeth, and be carelesse in every thing. In letting of ground commonly it is covenanted that the Tenant shall not let nor sell without the leave of the Lord, and that he shall not breake any pasture or meadow land, and what, and how much he shall sow of every kinde of graine, how much he shall have for pasture, how much he shall let lie, and how much he shall mend. Here have you almost as much as I am able to say in husbandry of the ground.

R I G O. I thankes you, you have greatly delighted me with the describing of your Pasture-ground and Cattable.

The end of the first Booke.

The



The second Booke: Of Gardens, Orchards, and Woods:

THRASYBULVS. MARIUS. IVLIA.



Cause of the alliance betwixt
Hearbes, Trees, and Come, and be-
cause their husbandry is almost one,
it is reason that next the first booke,
written of Earable ground and Vil-
lage, should follow the description of
Orchards, Gardens and their fruits.
Virgill in writing of husbandry,
left this part unwritten of: howe-
ver, divers others both old and new
writers have not without some diligence written of this part,
but yet by snatches (as it were) and not throughly: whose opi-
nions toynd with mine owne experiance, it semeth good to me
in this booke to declare. And since the use of Orchards and The use
of Gar-
dens of
great anti-
quie-
Gardens is great and ancient; and that Homer writeth, how
Laertes the old man, was wont with his trabaile in his Or-
chards, to drise from his mind the sorow he tooke for the ab-
sence of his sonne. And Xenophon reporteth, that king Cyrus, as
great a prince as he was, would plant with his owne hands,
and set trees in his Orchards, in such order, as it seemed an
earthly paradise. Q. Curius writeth of Abdolomius that for
his great vertue of a good gardener, came to be king of the Sidonians. And surely: not unsworthy is this part of husbandry este-
med,

med, seeing it doth not alone lyb:ing great pleasure, but also is greatly profitable for the maintenance of householde, and the sparing of charges, ministering to the husband daily fode, and sufficient sustenance without cost. For when (as Columella saith) in the olde time the people lived more temperately, and the poore at more libertie fed of flesh and milke, and such things as the ground and foldes yelded, but in the latter age when, ryot and dainties began to come in, and the wealthier soz to esteeme no fare but costly, and farre fetched, not content with meane diet, but coueting such things as were of greatest pice, the poore people as not able to beare the charges, were banished from the costlier cates, and driven to content themselves with the basest fode. And hereof sprang at the first the plantinge of Orchard, & making of Gardens, wherewith the poore creature that was, might stoe his Kitchin, and have his vintals alwayes at hand, the Orchard and Garden serving for his Shambles, with a great deale moxe commendable & hurtlesse diet. Herein were the olde husbands very carefull, and used alwayes to iudge, that where they found the garden out of order, the wife of the house (soz unto her belonged the charge thereof) was no godd hauwife, for they shoule be forced to haue their vintals from the shambles or the Market, not making so great account of Colwoorts then, as they doe now, condemning them soz the charges that were about them. As for flesh, it was rather loathed then used amongst them. Only Orchards and Gardens did cheifly please them, because the fruite that they yeld, needed no fire for the dressing of them, but spared wood, being alwayes of themselves ready dressed, easie of digestion, and nothing burdensome to the stomache : and some of them serving also to pouder or preserve wissall, as god marchandis at home, as Pliny saith, not driving men to sicke pepper as farre as Indie. Of Lucrin, I the Oyster not regard, as the Poet sayth. And thereso:re to make them of more worthinesse, & that soz their common profit, they shoule not b: the lesse regarded : there were divers noble men of the house of Valerius, that tooke their surnames of Lettuce, and were not ashamed to be named Lettisnen. The old people had in great estimation the Gardens of the daughters of Alciss; and of the kings Adonis

An evill
Garden to-
ken of an
ill hauwife

Or Lettus
fins.

nis and Alcinoi, of whom Homer so much speaketh, as also the great vaulted Gardens, eyther built by Semiramis, or by Cyrus the king of Assiria. Epicure is reported to be the first that ever devised garden in Athens, before his time it was not seene, that the pleasures of the Countrie were had in the Citie. Now when Thrasybulus travailing in the assayres of his Prince, chanced to come to the house of Marius, and carried by him into a Garden that he had, which was very beautifull, being led about among the sweet smelling flowres, and under the pleasant Arbores, What a godly sight (quoth Thrasybulus) is here : how excellently have you garnished this paradise of yours with all kinde of pleasures : Your Parlors, and your banketting houses both within and without, as all bedecked with pictures of beautifull Flowres and Trees, that you may not onely seede your eyes with the beholding of the true and lively flower, but also delight your selfe with the countersait in the midst of winter, seeing in the one, the painted flower to contend in beautie with the very flower : in the other, the wonderfull wo:ke of Nature, and in both, the passing goodnesse of God. Moreover, your pleasant Arbores to walke in, whose shaddowes keepe off the heate of the Sunne, and if it fortune to raine, the cloysters are hard by. But specially this little Riber, with most cleare water, encompassing the garden, both wonderfully set it forth, and herewithall the grane and godly quickeset hedges, no chargeable kinde of enclosures, differeth it both from Man and Beast. I speake nothing of the well ordered quarters, where as the Heaches and Trees are seveted every sort in their due place, the Pot-heaches by themselves, the flowers in another place, the Trees and Impes in another quarter, all in just square and proportion, with Alleis and walkes among them. Among these godly sights, I pray you remember according to your p:ro:uise (soz so the time requiceth) to shew me some part of your great knowledge in garden matters, sith you have upon this condition heard me heretofore grabling, or rather wearyng you with the declaiming of my p:ro:eskill in the tillling of the field. And first, as you began with the chowing of a place (meet to set your house upon,) so must I with the choyse of a Plot mette for a Garden. The ordering of Gardens is divers, for some

are

are made by the maner houses, some in the Huburbs, some in the Cittie, wheresover they be, if the place will suffer, they must be made as neare to the house as may be: but so, as they be as far from the Bathes as you can, for the Chasse or dust blowing into them, and eyther subject to the Dounge heape, whereby it may be made rich, or else in some very god ground that hath some small wiche running by it, or if it have none such, some Well or Conduit, whereby it may be watered. An excellent plot for the purpose is, that which declineth a little, and hath certaine gutters of water running through divers parts thereof: for gardens must alwayes be to be easily watered, if not with some running streme, some pumpe to be made, or kettle, well, or such like, as may serve the tuncie of a naturall streme. Columella would have you make your search for wa-
ter, when the Sunne is in the latter part of Virgo, which is in September, before his entrance into the winter Equinoctiall, for then may you best understand the strength or godnesse of the springs, when after the great burning heate of the Sommer, the ground hath a long while continued without raine. If you can-
not thus have water, you must make some standing pond at the lower part of the ground, that may receive and containe such water as falleth from above, wherewith ye may water your gar-
den in the extreme heat of Sommer: but where neither the nature of the soyle, nor conveyance by Conduit or Pumpe, or running streme is to be had, you have no other helpe but the raine water in winter, which if you also have not, then must you delve and lay your Garden thre or fourfe foote depe: which being so ordered, will well be able to abide whatsoeuer daughte
doe happen. This is also to be regarded, that in gardens that are destitute of water, you so ordre them into severall parts, that what part you will occupie in winter, may lie towards the South, and that which shall serve you for Sommer, may lie to-
wards the North. In a Garden, as in the choyce of Corne
ground, you must looke whether the godnesse of the ground be
not hindered by the unskilfullnesse of him that hath occupied it.
You must also make choyce of your waters, of which the best
(as Plinic saith) are the coldest, and such as be sweet to drinke:
the worst that comes from Ponds, or is brought in by trenches,

The time
of search-
ing for wa-
ter.

because

because they bring with them the seedes of grasse and wiedes: but the ground doth most delight in raine water, which killeth wormes and baggage that breeds in it: but for some herbes, salt water is needfull, as the Radish, Water, Riw, Hawell, to which all salt water they say, is a speciall helper, making them both pleasant and fruitfull: to all others, sweet water is onely to be used. And because I have begun to entreat of wate-
The time
of wate-
ring of
Gardens.
ring, I must give this note, that the times of watring is not in the heat of the day but early in the morning, and at night, least the water be heated with the sunne: onely Ball you must water at noone, the seeds something will come the sooner up, if they be sprinkled at the first with hot water. You have here heard, that the first needfull thing for a Garden, is water. The next to this is enclosure, that it be well inclosed, both from unculy folks & thievies, and likewise from beasts: lest lying in waite for your herbes and your frui'ts, they may both bereave you of your paines, and your pleasure: for if either they be bitten with Beasts, or too often handled with men, it hindreth them both of their growith and sowing: and therfore it is of necessity to have the Garden well inclosed. Now for inclosures, there are sundry kindes, some making earth in mould doe counterfeit Wick-wals: Others make them of lime and stones: some others of stones layd one upon another in heapes, casting a Ditch for water round about them, which kinde Palladius forbids to follow, because it will draw out moisture from the Garden, except it be in marshy ground. Others make their fence with the seedes and sets of Thorne: some make them of mudde walles, covered with strawe or heath. Varro maketh mention of four kindes of enclosure: the first naturall, the second wilde, the third souldierly, the fourth, of carpenters worke. The first and naturall is the quickeſet hedge, being set of young thornes, which once well growen, regardeth neither fire nor other hurt. The ſecond is the common hedge made of dead wood, well ta-
Enclosing
of Gar-
dens
ked and thicke plashed, or railde. The third the ſouldiers fortifying, is a deepe ditch with a rampier: but the ditch must be ſo made, as it may receive all the water that comes from above, or falleth into it, wherin the rampier must be ſo ſhape, that it may not eaſily be climed. This kinde of fence is to be made,

where

The second Booke, entreating

where the ground lies neare the hieway, or butts upon the River, of which sort I shall have occasion to speake moze hereafter. The fourth fence made by the Carpenter or by the Mason, is commonly knowne : whereof there is some sortes, either of Stones, of brickes, or Turse, and earth, and little stones framed in moulde. Columells following the ancientest authoress, preferreth the quickset hedge before the dead, both because it is lesse chargeable, and also endureth the longer, continuing a long time : which hedge of yong thornes, he teacheþ to make in this sort. The place that you determine to enclose, must after the beginning of September, when the ground hath biene well soaked with raine, be trenched about with two furrowes, a yare distant one from the other, the depth and breadth of every one of them must be two fote, whiche you must suffer to lye empty all winter, providing in the meane time the siedes that you meane to sow in them, which must be the berries of sharpe thornes, briers, holly, and wilde Eglantine, whiche the Cōches call dog brier. The berries of these you must gather as ripe as you may and mingle them with the floure or speale of tares, whiche when it is sprinckled with water, must be put upon old ropes of shippes, or any other ropes, the ropes being thus handled and dried, must be laid up in some boorded floore. Afterward when winter is done, within sixtie dayes after, about the coming of the Swallow, if there be any water in the furrowes, it must be let out: and the mellowed earth, whiche was cast out of the furrowes in the ende of Summer, must now be cast in againe, till you have filled them up to the midis: then must you handsomely unsolde the ropes, and lay them in length through both the furrowes, and so cover them, taking heede you throw not too much earth upon them for hindring the spring, whiche commonly useth to appere within thirtie dayes after, and when they be growne to be of some height, they must bee made to incline to the space betwixt the two furrowes: in which space you must have a little walled hedge, to teach the springs of other furrowes to climbe by, whiche will be a iolly stay and a comfort to them. But I have another and a more readier way of making of them, whiche I first practisell in this Countrie, Rivers otherweare have followed: I also doe make a certayne Ditch,

The mas
king of a
quick-set
hedge.

Another
newer and
better way
of making
a quick-set
hedge,

and gathering in the wood, the young sprigs of thaynes, cutting off the tops, I set them on the banke of the Ditch, so that they stand halfe a foote out of the ground; plucking up all the weeds (specially the first Summer) that grow about them, and sucke away the wyce that comforts the set. The rootes being thus rid, I cover all the earth about them with straw, whereby both the dew of the night is let into the rootes, and the yare plant is defended from the burning of the Sunne. The yere after, I make a little slender rale of plants, wherunto I lay up the sprigs, weaving them in such sort as I will have them to grow, which I yarely make higher, according to the heighth that I would have a hedge to spring. Eight, or at the uttermost nine foote, is a sufficient heighth, and whatsoever sprigs above, must be plashed of one side or the other, to make the fence the stronger. When I have thus done, I mat it thicker and thicker every yere, filling up the places where I set it thinn, with such boughs as I see growing out of order, and thus it is wovyn so thick with yarely bindings, that not so much as a small bird is able to passe thorow it, nor any man to looke through it. When it is thicke enough and bigge enough, the superfluous sprigs most every yere be cut. This hedge can never be destroyed, except it be plucked up by the rootes: neither feareth it the hurt of fire, but will grow the better for it. And this is my way of enclosing a Garden, as the pleasantest, most profitable, and of least charges.

There is another way of making of a quichelet hedge, which our Hedgers in the Country doe use, which is nothing the stronger. For setting the young rootes, as you will be said before, when they be grownne to some greatness, they cut the Thayne neare to the ground, and being halfe cut and broken a sunder, they han it along the Hedge, & plash it. From these cuts spring up new plants, which will as thay grow to some highnesse clasp them, and clasp them againe so close contynually, till the Hedge be come to his full heighth. Now this way the hedge is made so strong, that neither Hound nor man beath, is able to breake thorow it: but the other is a great brake above pleasant to the eye. And if I will not have enough to suffice, then I make an huge Oxen of them, which

Anothe
sort of
hedging.

The second Booke, entreating

T H R A. You have now spoken of water and enclosure, two principall points in a Garden: It now remaineth to speake of the ground meete for a Garden, and the order of dwelling it.

M A R I V S. Of the simbry sortes of ground, and of the discerning of them, because you in your describing of Corne ground before have sufficiently spakened, I doe not thinke it needfull for me to repeate it. Againe, it is enough to me to adde only this, that the ground ought not to be too rich, nor too leane, but sat and mellow, which bringeth forth a small kinde of Grasse like haices: such ground requires least labour, the which recompence it againe, with his fruitefulness. The stiffe, leane, and cold ground, is not to be medled with, as Columella wixteth in appointing god ground for Gardens.

What to
be consider-
ed in the
choyse of
Garden
ground.
Ayre.
Windex.

And thus much of the Garden ground, which as I sayd, is spattered, or may be watered, and is enclosed either with a wall, a hedge, or some other safe enclosure. After this, it is needfull it lie well to the Sunne, and warmth: for in ground that is very colde, the warmth of the Sunne will not much availe it. And contrary, if it be a hot burning sand, the benefit of the Heavens can little helpe it. You must yet looke, that it lie not subject to ill mindes, that are dry and scorching, & bring frosts and mists. Thus farre, if I could have my Garden lie as I would wish, but in as much as every man desires a Garden, and every man cannot have every commodity to him then that wants these benefits and hath only barrennesse to worke upon, let me advise him to take these paines in reducing his ground unto goodness, as arte to breake up his earth in September and lay the mould loose cleane from weedes and stones, and so as all weathers whatsoever may peice and beaten it, and so let it lie till after October, in all which space, to com weedes or evill growth appear, plucke them up by the rootes, and keape the earth as cleane as at the first ploughing. In November turne up the ground againe, and trench it at leaste fourteene deep, and fill these trenches with good meaneance. One or twoe. The scoulering of ponds or ditches, shal be an thing that is contrary to the barrennesse of the earth you labour, and as you fill the trenches with meaneance, to mixe with the earth that is thrown up, till both

both be incorporate together : so let the ground lye till the middest of January, at which time trench it over againe, but not so deepe as before, and measure it also as before, then cast it into a lebell, and this shall make the bareness earth as capable of growth as the best, at the middle of March following, which is the most convenient time for any action in the Garden *. But now to the ordering of your Garden. First, you must be sure that the ground which you meane to sow in the Spring, be well digged in the fall of the leafe, about the laste of October : and that which you garden in the fall of the leafe, must be digged in May, that either by the calfe of Winter or the heat of Summer, both the clod may be mellowed, and the rootes of the wades destroyed, say much before this time must you dung it. And when the time of sowing is at hand, a faire dayes before, the wades must be got out, and the dung layed on, and so often and diligently must it be digged, as the ground may be thoroughly mealed with the mould.

Therefore the parts of the Gardens must be so ordered, as that which they meane to sow in the end of Summer, may be digged in the Spring : and the part that you will sow in the Spring, must be digged in the end of Summer : so shall both your fallowes be seasoned by the benefit of the cold and the Sunne. The beds are to be made narrow and long, as p[er]fect in length, and faire in breadth, that they may be the easier wades : they must lie in wet and watric ground two foote high, in dry ground a foot is sufficient. If your beds lye so dry, as they will suffer no water to farr upon them, you must make the spaces betwixt higher, that the water may be forced to lie above when you will. Of the kindest and softest of dunging being suffi-
ciently entreated of by you, I will say nothing : onely, adding this, that the dung of Askes is the best, because it breedeth feliest wades : the next is Cattels dung, and Shep[es] dung, if it have lien a yeare. The ground as I said which we meane to sowe in the Spring, we must after the end of Summer let lye fallow, to be seasoned with the frost and the cold: for as the heat of Summer, so doth the cold of the Winter bake and season the ground. When winter is done, then must we begin to dung it : & about the fourteenth or fifteenth of January, we must dig it againe,

The order
ring of
Gardens.

Beds.

Of dig-
ging and
dunging of
Gardens.

dividing it in quarters and bess. First must the hedges be plucked up, and turves or baraine ground must be layd in the Alleys, which being well beaten with Beates, and so trod up, on that the grasse be more away, so that it scarre appeare, it will after spring up as fine as little haye, and yeld a pleasant sight to his eye, which will be very beautifull. When you have sevred your flowers by themselves, your phisicke heathes by themselves, and your Pot heathes and hallets in another place, the heas and the boordes must be so cast, as the Gardiners hands may reach to the midst of them, so shall they not neade in their labour to tread upon the heedes, nor to hurt the hearbes. And this I thinke sufficient for the preparing of your ground before the sowing. Now will I speake of sowing, and what shall be sowed in every season. To speake of all sortes of Herbs and flowres, were an endlesse laboure, onely of those that are most needfull, I meane to intreat. And first of heathes, some are for the Pot, some for the sight, some for pleasure and sweet favour, and some for phisicke. And againe, some are for the winter, some for summer, and some betwixt both. The first time

of Son-

**Three sea-
sons to
sow in.** of sowing after Winter, is the moneths of March, April, and May, wherein we use to sow Colworts, Radish, Rape, and after Beetes, Lettuce, Sorel, Mustard-seede, Coriander, Dill, and Garden Cresses. The second season for sowing, is in the beginning of October, wherein they set Beetes, and sow smallage in Nigella & Arreche. The third season, which they call the Summer season, in some place the Gardeners begin in January, wherein they set Cucumbers, Courds, Spinach, Radish, Purslane, and Savory. Many things may be sown betwixt these seasons, and yet doe very well. All Garden herbs are commonly sown before the tenth of June, such things as you would have sown, you may sow after this time.

Some things are sowed only two times a yere, in the spring, & in the end of Summer. Others againe at sundry times, as Lettuce, Colworts, Rocket, Radish, Cresses, Coriander, Chervill, and Dill. These are sowed about March, or about September, and Columella saith, doe come eyther of the sude, or of the slip; some of the roote, some of the stalle, some of the leafe, some of the flot, some of the head, some of both; others of the Barke, others of the Pitt, some both of the sude and the slippe, as Rew, wilde Marierum,

Marjoram, and Basil, this they cut off, when it comes to be a handfull high: Others grow both of the side and the roots, as Onions, Carliche, and such like. And although all things will grow of their seedes, yet this they say, few will not doe: for it very seldom springs, therfore the rather set the slips. These that are set of the roots, doe commonly last longer, and branch better, putting forth young lippes from his sides, as the Onion and Cith. The stalk being cut, they all doe spring againe for the most part, except such as have speciaall stalkes, called by Theophrastus *τοξαλος*, that is, such as when the stalk is cut grow no more: Gaza interprets it Secaulis. The Rape and the Radish, their leaues being pulled away and covered with earth, doe both grow and continue till summer. The fruits of some is in the earth, some without, and some both within and without, some lie and grow, as the Cucumber and the Gourd, and sometimes hang, though of greater weight by much then the fruits of Trees: some requires dayes and helpe to clime by, as Hops, Lupines, and Pease: some seede groweth better, the newer they be, as Lettuce, Nigella Romana, Cucumbers, and Gourdes, and therfore some use to steep their Cucumbers in milke or water, to cause them to grow the speedier. On the other side, of old seede better groweth the Bete, Garden Cresses, Penitall, great Marjerum, and Coriander. In the Bete this is onely observed, that the seede commeth not all up in one yere, but part the second yere, and some the third; and therefore of a great deale of seed, springeth but a little. Touching seed, this is to be well seene to, that they be not too old and dry, that they be not mingled, or taken one for another: old seed in some is of such soore, as it changeth the nature: for of old Colworts seede springeth the Rape, and likewise of Rape seede Colworts. Also that ye gather not your seedes too soon, nor too late. The very time, as Theophrastus writeth, is at the spring, the fall of the leaue, and the rising of the Dog: but not in all places and kindes alike. Of seeds, the soonest that spring are these, Basil, Arach, Riven, Rocket, that commeth up the third day after the sowing, Lettuce the fourth day, the Cucumber and the Gourd, the first day, Purslin, longer ere it come, Dill, the which fourth day Cresses and Mustardseed the first day, Betes in ^{What Seed} _{springs.} ^{soone, and} summer

98 The second Booke, entreating

The weas
ther fo r
Sowing,

The
Moone.

Gummere the Anthony, in winter the tenth or the twelfth. Liches
the xv. day, sometime the xii. Captaine later: which if it be
newe (except it be thysell together) it groweth not at all. Peni-
tall and great Sparganium, come up after xxi. dayes. Parsly,
is of all other the longest before it come up, appearing the
fortieth day after, or many times the fiftieth. You must
also consider, that the weather in sowing is of great force:
for the frostyng faire and warme, they come up the soone.
Some sayes heire one yere, and never after come up: some a-
gaine continue, as Parsly, Smal ledge, Liches, Nigella, that
being once sowed, come up every yere. Such as continue but
a yere, presently upon their sowing die: others spryng againe af-
ter the losse of their stalke, as Liches, Nigella, Onions, and
Garlick: and commonly all such as put out from the side:
and all these require dunging and watering. In sowing beside
some think, you must have regard to the Moone, and to sow and
set in the excreste, and not in the mane. Some againe think it
best from that she is fourteene dayes old, till thre be eightene: some
after the third, others from the tenth, till the twentieth; and
best (as they all suppose) the Moone being alost, and not set:
And the best time to begin to garden is at the end of February;
but I will now descend to the more choicer herbes, and first I
will speake of Asparagus, which was wont to grow wild, but
now is brought into the Garden, it is called in Spake,
Asperges, in Italian, Spanish, and French, it is almost all
one: the one call it Asparago, the other Asperge, the Dutch
men call it Spirages and Spiratus, because it comes up of it selfe:
for the Garden Asperge they were not acquainted with. Now
before I proceede to the planting of this or any other, let me
gibe unto every diligent Gardener this one most necessary
adfection, which I would have him carry continually
in his memory, which is, that all your herbes must be
sowne thicke, and but thinly coveted, as namely not above
three fingers; that all plantes which Cabbedge, must be
sowne thicker, and deeper coveted, as a full handfull at
the least, but when you remoue them, then plant them
shame and set them well into the earthe. All Rootes must
be sowne thicke and deep as almost a fute, syghter let in
to

to the ground, or else scattered in the deepe furrowes digges and layd up for that purpose, in which the quantitie of your seede must onely direct you; so if you haue occasion to sow but a small quantitie, then you may set them one by one at your leasure or pleasure, but if your quantitie of seede be great, then (as before I saye) turne up your earth into deepe furrowes, and in the bottome thereof scatter your seede in shirme royles, and after rake these furrowes into a smooth leuell, and thus doing you shall both save labour and gaine profit; but to returme againe to Asparagus*. It is planted in two farts, either of the seede, or the roote: they take of the seede as much as you may take up with thys fingers, and besowing it in little holes, every two of thys sides halfe a foote shalder: they set them in rich ground, in February, and couer the ground with dung. The iuedes that grow, must bee well plucked away. After the fourtie day they come up as it were to one roote, and tangled together: the rootes have sundry strong thredes, whiche they call the sponge. In ground that is drye, the rootes are to bee set depe, and well tempered with dung. In hot grounds, on the other side, they are to be set shallow in the top of borders, lest the moysture destroy them. The first yere you must breake off the stalkes that grow: so if you plucke them up by the rootes, the whole sets will follow, which are to bee preserved for two yeres with dunging and weeding. All the yeres after, you must not gather them in the stalle, but pull them from the roots, that the rootes being opened, may the better spring, which except you doe, you hurt the spring. Whim that you meane to keape for seede, you must in no wise missele whitall. After, turne up the bushes, and in winter dung well the rootes with dung and ash; they are planted also of the rootes which after two yeres you must remoue into a furrowe into well manured ground. The trenches where you meane to set them, must stand a boord a summer, and a waist-hight in depth, whiche you must so lay your rootes (as being catenary) they may helf graue: but in the spring before they come up, you must daunce the earth with a little spade, to easen them the better to spring.

and to make the rootes the greater. Cato would have you take them, but so, as you hurt not the root, and after to pull the plant from the root: for if you otherwise breake it, the root will die, and come to nothing. But you may so long crop it, till you see it beginne to grow to seede: in which yere for the winter time, you may according to Catos minde, cover it with straw or such like, lest the cold do kill them, and in the Spring open it againe, and dung it well. Some thinke, that the first yere is needlesse to doe any thing to the plant, but onely to weed it. From the roots, which they call the Sponges, there springeth first certayne buds with crumpled knots, very good and pleasant so: hallets: which if you suffer to grow, it straightway busheth forth in banches like Fennell, and at length grow to be prickly: after it hath flowered, it beareth a Berry, first graine, and when it is ripe, red. If you would have hallets of Asparagus all the yere through: when you have gathered the berries, open the rootes that cumne aloft by the ground with digging, and you shall have the rootes send forth new buds out of hand. It is thought, that if you breake to powder the horne of a Ram, and sow it, wartring it well, it will come to be good sperage. In the Spring time they make a very good hallet, being sod in water, or satte boath, till they be tender: for if you scorch them too much, they will waste away. When they be sod, they dresse them with Winegar, Oyle, Pepper and salt, and so eate them: or as my friend William Fraunce, very shifull in these matters, telleth me, they cut them in small pieces like Dice, and after they have parboyled them, butter them with sweet Butter, a little Winegar and Pepper.

Kew.

Rue, which the Goakescall ~~call~~, the Latines Ruten, the Italian Rucche, the Spaniards Rudo, the Frenchmen Rude de gardin, is planted at the end of February, or in March, prospering best in dry and somme grounds, it abhorreth both water and dung, which all other herbs most delight in: it selfe delighteth in almes, and where all other plants will spring of the sene, this they say will never doe it. The branches being clipp'd off, and set in the Spring, will very well grow, but if you remoue the old root, it dieth: it delighteth in sunnes, and in drye, liggith, and lying downe (as they say) it.

it prospereth the better; it is sowed with cursing, as Cummin, &
divers others, and can not abide the presence of an uncleane wo-
man. Lettuce is called in Dutch Lartich, in French Lactue, in
Greke Σαλατινη, in Italian Lactua, & so in Latine, in Spanish
Lchugas, whereof besides the wild, there are three kindes, one
crumpled, another headded, a third rounde. At the end of Februa-
ry, we use to sow it, that it may be removd about April or May.
In hot Countries they sow it in January, or in December, with
intent to remov it in February: but you may sow it at any
time of the year, so the ground be good, well dunged, & watered.
When you remov them, the roots must be pared and rubbed o-
ver with dung, and such as be already planted, their roots must
be pared & dunged: they love a good ground, moist & well dunged,
they spread the better, (if you set by them the Rape): when they
begin to stalk, the stalk being tenderly cloven, you lay upon it
a cloo of a Tileshard: they will be white & tender, if you sprinkle
them often with sand. If two daies before they be gathered, their
tops be tyed up, they will be round and Cabberged. If the roote
being removd when it is growne a hand broad in heighth, be
pared and smered with fresh Cow dung, and earth cast about it,
be well watered, and when it groweth high, the top be cut, a pot-
shard laid upon it, the sweater also they will be: the more you re-
straine the stalk from shooting up, which must as I said, be
kept downe with some stoe or weight, that they may spread the
better. If the Lettuce chaunce by reason of the badnesse of
the soyle, the siede, or the season, to waxe hard, the remov-
ing of it will bring it againe to his tendernesse: it will have
sun dry and divers tastes, if taking a Credole of Shepe, or
Goates dung, and hollowing it curningly with an Arole, pou-
thfull into it the siede of Lettuce, Cresses, Basill, Rocket,
Smallage, Peperely, and Raddish, and after wrapping it in
dung, you put it into very good ground and water it well. The
Peperely, or Smallage goeth to roote, the others grow in
height, wipping still the taste of every one. Constantine affir-
meth Lettuce to be a moist and cold heathe, a quencher of thirst,
and causer of sleepe: and that being boyled, it nourishest
most, and abateth Letcherie, for which the Pythagorians call it
Eunuchion. Galen himselfe the prince of Physitions doth
greatly

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greatly commended it, who in his youth did always use to eat it raw, and after in his elder yeres boyled, whereby he kept his body in good temperature. Endive, in Latine, Incubum, or Inebus, not unlike the Lettuce, some call it Garden Succore, the Dutchmen, and Common soft, Endiviam, the Italians and the French, Ciceriam, the Spaniards, Endibia: it is sowne as other Garden hearbs in March, it loveth moisture and god earth, but you must make your beds when you sow it the flater, lest the earth falling away, the rotes be bared: when it hath put forth leaves, you must remoue it into well dunged ground; that which is sown before the kalends of July, doth come to seed: but that which is sowne after feideth not. You must sow that which you would have to serue you in winter, in October, in warme stony places for Hallets in winter: they use at this day when his leaves be out, to fold them up together, and tie them round in the top with some small thing, covering them with some little earthen vessele, the rotes will remaining to nourish them withall: thus doing they will grow to be white and tender: and to lose a great part of their bitterness. It is said, that they will be white, if they be sprinkled a few daies abroade, and lying upon lamb, be washed with the raine: And thus is Endive with his increase preserved al winter. Some there be, that contenting themselves with lesse charges and labour, doe onely cover them with earth, others againe with straw: this order of wintering of it, is now in every place growing to be common.

COLWORTS. THRA. I see also in this pleasant Garden Colwoorts, that we Country folkes be so well acquainted with.

MARIVS. It is mister my Garden shoud not want that, whiche as you know Cato preferreth before all other hearbs, in describing the wonderfull properties and uses thereof: and this place I onely appoint for such common Pot-hearbs, as Colwoorts, Bates, Endive, Onions, Mapes, Radenes, Lettis, Carrots, Radish, Garlike and Patisips: the lasthee set I place by themselves, and as the nature of every one requireth. Colwoorts is commonly called in Latine Brassica, as Gaulia, in Greeke κράσις, in French Choux, in Italian Caule, in Spa-
nish Verza, in Dutch Kool. The old writers made divers
sorts

sorts of it, as at this day there be. One sort with great and broad leaves, a big stalk and a very fruitfull. This sort is commonly knowne, which being the pleasantest in winter, when it is bitten with the frosts, is sod with Bacon, and eaten in paxedge. The tender part of the top being a little boyled, is served for sallets, dressed with oyle and salt. The second sort with the crumpled lease, of the resemblance that it hath to Smallage, is called Selloeis or Apiaia, of the common people crumpled Coll, or wrinkled Coll. The third sort which is properly called Crambe, hath a smaller stalke and lease, smooth, tender, and not very full of iuyce. The fourth sort is the great Cabedge, with broad leaves and a great head, called in Dutch Rappes, in French Chouz Cabuz, of the old writers Tritiana Brassica, and this kinde is onely most set by. In Germanie there is one kinde of them that they call Lumbardy Colwozt, or Savoy Colwozt, swarter then the other; and not able to endure the winter: and another with very broad leaves crumpled, and full of wrinkles, but a great deale blacker, which Italians call Nigrecaules, and the Latines Nigra Brassica, of the number of those that they call commonly red Coll, of the old writers Marucina Brassica. There are besides other sorts, taking their names of the Countrey where they growe, as Aincis and Cumans. The best time for setting and sowing of Collwozts, is after the Ides of Appill. In cold and rayne Countries, the sooner it is dunged and raked, the better a great deale will the Colwozts be: some use to sow them about the Maltons of March, but the chiefeſt of it goeth out in lease, and when it is once cut, maketh no good stalke for the winter: after: yet may you twise remoue your greatest Coll, and if you do so, you shall have both more ſeede and better yield: for it ſoweth boundeth with ſeede, as it is ſowne with no leſle abundance then Rape ſeede. For the making of oyle, Colwozts may be ſownen all the yeare long, but chiefly in March after it is ſownen, it appeareth within ten dayes except your ſeedes be old and dry, for old ſeede will growe to Rapes, as old Rape ſeede will to Colwozts. Some ſay it prospereth well in faint ground, and therefore they ſee to cast upon the ground ſaltpeſter or alders, which alſo diſtroyeth the Caterpillar: it is remoued in June, chiefly.

chiefly when it hath put forth sixt leaues, and that when the weather is rainie, so that you covet the rate before with a little fresh dung, and wap it in seawarde, and so set it. More diligence is to be used about the Cabbridge; it must be sownen in March in the full of the Moone, that it may remaine in the ground two moneths, and in May you must take them up, and set them againe two fote asunder. The ground must be well digged where you set them, and as fast as they grow, the earth must be raised up about them: so that there appeare no more than the very tops of them: so to cause them to grow faire and great, you must as oft as you remove them, banke them up with earth about them, that nothing but the leaves appeare. And thus you must often doe to all the kindes of them, the herte frosts make them have a greater sweetnesse. The Vines, parcs (they say) where Colivers grow, doe yeld the worter Vines, and the Coll corrupteth the Vines.

Spinage.

You see hereby Spinage, so termed (as you may know) of the prickly seedes, called in Latine Spinacia, and evenso in Italian, Spanish, French, and Dutch: it is sowne as those before, in March, Apull, and so till September: if it may be well watered, it cometh up in feauen dayes after the sowing, you shall not neare to remoue it. The seede must presently after the sowing be covered, and afterward well weeded: it refuseth no kinde of ground, but prospereth in every place: you must often cut it, for it continually groweth: it is to be boyled without any water, where in the boyling it doth yeld great stoe of fraye, and contenting it selfe with his owne liqueur, it requireth none other. Afterward, being beaten and stirred with the Landis, till the clamminesse be gone: it is made up in little balles, the juice strained out, and boyled upon a Chayndish with Dyle or Butter, some addeth thereunto Tierneice, or the juice of sowze Grapes, to make the fasse more tart. I shew you in order as you see, all my Kitchin heathes: now followeth Sorrell, called in latine, Acerola, in Italian likewise, in Spanish, Romaza, in French, Oxella, in Dutch Surick, of the sowernesse thereof. There are sundry sortes of it: we have at this day two kinds, the garden Sorrell and the wilde, which are pleasant both in broth and Hallsets, and of this hearbe, the wilde sortes are both

Sorrell-

sowze

above in taste, and smaller in leaves: it is sowned as all other pot herbs are; and it growmeth of it selfe in Medowes and Gardens. Cummis and Coriander require well ordred ground: they are sowned in the spring, and must be well weeded. Cummin is called in Latine, Cuminum, and almost like in all other Languages: it is sowned best (as they think) with curving and extirration, that it may prosper the better. Coriander is called in Latine Coriandum, and is almost by the same name in all other tongues: it both best prosper when it is sowned of seede that is oldest. Smalldge and Parsly, called in Latine, Apium Petroselinum, and Apium hortense, in Italian, Apio domestico, and Petrocello, in Spanish, Peterhilic, or Peterlin: it is sowned or Parsley, at the Aequinoctiall, in the spring time, the seed beaten a little, and made up in round pellets: we call it Aequinoctiall when the night and the dayes are of equall length over all the world: that is, when the Sunne, the Captaine and Author of the other lights, the very soule of the world, doth enter into the signes of Aries and Libra. It is thought to prosper the better the older the seede is, and to spynge the sooner: it commeth vp the fiftieth day, or at the soonest the fiftieth day after that, it is once sowne: when it is once sowne, it abideth a long time, it reioyceþ in water or wet. Fenell, in Italian Fenochio, in Spanish Feneli, Hinozo, in French Fenoil, in Dutch Fenchel, is sowned in the beginning of the spring, in hot sunny places, stony ground, or a dry ground: being once sowne, it spryngeþ every yere. Anise, in Latine Anisum, so knoune in most tongues, as Cuminum and Coriander: requireth a ground well ordred and dressed. Dyll, in Latine Anethum, in French, and Italian almost so, in Spanish Encido, in Dutch Dyl, endureth and abideth all kinde of weathers, but delights most in warme ground: if it be not well warred, it must be sowned thinner. Some never cover the seedes when they sow them. supposing that no Bird will meddle with it: it commeth vp also of it selfe as Fenell doth. Chervill, in Chervile, Latine Cerfolium, in Dutch Kerbell, in Italian Gingidia, in French Cerfeuil, desireth a god ground moist, & well dunged: it is sowned with the rest in cold places. In this same moneth they also sow Beetes, though you may sow them when you will at any other time of the yere as soppinage, it is a common Countrey Beetes, Yeartree:

pearbe: they call it in Italian Beitola, in Spanish Accig, in
 Dutch Beer, or Mangelt. No Garden hearbe hath greater
 leaves, so that with due ordynge, it groweth like a young tree.
 It is called Beta, because when it seneth, it is (as Columella
 affirmeth) like the Greek letter β. There be two sortes of them
 the white and the blacke, the ordynge of them is after one sort:
 it is sowne as Colworts, Marzell, and Radish are, in March,
 Aprill, or May. Some think the best time for sowing it is
 while the pomegranate beth flower: it may be sowne nevertheless
 as Lettuce, Cols, and divers others, at any time of the
 summer. The siede, the older it is, the better it is to be
 sowne, as are the seedes of smallage, Parsley, Garden Cresses,
 Savory, wilde Marjerum, and Capander, though in all other
 the newest be best. It commeth up in summer the first day,
 in winter the tenth after the sowing: it loveth a moyst, a rich,
 and a mellow ground: you may remoue it when it hath put
 forth fine leaves, if your ground like well to be woxed: if it
 be drye ground, it must be set in the end of the summer, as I
 have said of Colworts, though it make no great matter at what
 other time you doe it. When you comewe it, you must rub over
 the roote with new dung. This is proper to the Barke, that
 his siede come not all up together, but scame the pierce after,
 some the third pierce: and therefore of a great deale of siede,
 there is at the first but a little shew; it groweth the broader and
 the whiter, if when it is something groiane, you lay upon it
 tile stones, or such like, to cause it to spread, as I spake before
 of Lettuce. Garden Cresses, in Italian Nasturio, and Agretto,
 in Spanish Mestuerzo, in French Cresses de jardin, in Dutch
 Keris, are sowne both in the Spring, and at the fall of the leafe,
 it commeth up the first day after it is sowne, and drinkeith a
 way the moisture from such hearbs as grow neare him: ming-
 led with other hearbs, he careth not what weather come, and
 therefore prospereth both as well in winter as in summer;
 if it be sowne with Lettuce, it commeth up exceedingly, it de-
 lighteth in moistnes, which if it want, it will doe well enough:
 in watry places it groweth of it owne accord: as about Padel-
 bor, a towne in Westphalia, it groweth in great abundance in
 the River, and therfore is called of some Water Cresses: it
 was

Garden
Cresses.

was called in the old time Sisimbrium. The branches when they ware old, are tented together with white hazzp rings. Garden Poppy, called in Latine Papaver latium, is thought best to grow where old stalkes have beene burnt: it is sowed in warme places, with other Pot-hearts. Mustard-seede, in Latine Sinapi, in Dutch Seness, in Italian Senape, in Spanish ^{Garden}
^{Mustard-poppy.} Seneca, in French Seneve, there are two hindes, white and blacke: it is best to be sowed in the end of summer, and againe in March. Where it is once solwe, it is hard to rid the ground of it againe, because the seed doth still grow as it falleth. It lovethe to grow upon dung-hils, and cast bankes.

THE R. A. I see you have very sayre Raddishes here.

MARIVS. Nothing so faite as I have had them, soz wheres Raddish as they delight in the sunne, and in warme ground, my Gardiners have here set them in the shadrow. The order of them is to be set in very god ground, and lying upon the sunne: some say, it doth not greatly care for dung, so it may have chaffe strewed upon it: when it is come to some growth they must be covered with earth, soz if it flowreth once above the ground, the rootes will never be god, but hard and full of pith. It is calld Raddish, because it excelleth all other rootes in greatness. Plinic wryteth, that he saw at Erford in Germayne, Raddish as bigge as the body of an Infant. It is sowed twise in the yere, in February or March, the yone being in the leane, lest it grow too much in leaves, & singers distant one from the other: and againe in August, which is the best season for them. Those that you set after the tenth of June, will never feed, the like is to be obserued in all other seedes: it commeth up commonly the third day after it is solwe: in hot and mouthethly Countries, the weather being faite, it giveth stone to stalle: and quicke-ly sieves. The leaves as they grow, must still be trampled down and troden upon, whereby the roote shall grow the greater: otherwise it flowreth with leaves and giveth increas to the lease and not to the roote: the leafe and the smother the lease is, the milier and the sweter is the roote: cold as some say, doth further the godnesse of them: they say they will be very pleasant, if the seed be streped in sand, or in the iuppe of Raizing: they ware swet with cold as the Rape doth, and their bitternes is taken

taken away with watre, and therfore some would have Radishes watered and nourished with salt wates: being sodden they come to be very swete, and serve the fynche of Rapes; given fasting they provoke vomite, they are hurtfull to the veines and to the teeth. Radish eaten at first, is a god preservative against poysoneaten before meate, it breaketh winde, and provoketh urine: and after meat it loseth the bellye; it is called in Latine Raphanus, in Italian Raphano, in Spanish Rayalo, in French Rave, in Dutch Retich.

T H R A. There is another kinde of them, that the Dutch men call Merrettio, I take it to be that which the Romans called Armaracia, called commonly in Italy Ramaracia, the first letter misplaced.

M A R I V S. You say well, but this is more full of braunches, greater in leaves, thinne in body: the leavess are not unlike to the former Radish, but that they are a litle sharper and longer, and the roote slenderer, and therfore there are some that denise it to be Armaracia; but here let the phisitions contend. Theophrastus maketh mention of sundry sortes of Radish: This kind of Radish hath a wonderfull biting taste, a great deale more then mustardseed, and fetcheth teares from the eyes of them that eate it: it is set and planted in this land. The roote is cut in a great number of pieces, whereof every peice prospereth: for if you plucke up this kind of Radish by the roote, you may cut off a god quantitie of the roote, and dividing them into small pieces, setting the old roote againe by himselfe, and they will all grow and prosper very well.

T H R A. Pea: have you gotten the Rape? Hitherto I thought he had onely belonged unto us, for we use to sowe them after the sunne hath binne at the highest, and immediately after our other Cereals, for the substance both of man and beast.

M A R I V S. You doe well, and we sowe it now in May, and in wattery ground somer, and in some places in July. There are divers sortes of them, some of them round, some grow all in length, and are most pleasant in taste, as at Singz, and in the Country of Bayar. Some againe of the quantitie of a mans head, and of a hundred pound weight: but the smallest

first is the sweetest. There is another kind of Rape that they use to sow, which carrieth his taste in little Cods, and is chiefly planted in Germanie for to make Oyle, of the which you, the other day spake of, it is called in *Otakē*, in French Rave, in Italian Rapo, in Spanish Nabo, in Dutch Ruben. The little Rape,
 There is also another wild kind cal'd Rapunculus, that groweth halfe a yard high, full of seed, and tender topped. This they gather in the Spiring time, before the stalke be sprong up, and pulling it up by the rootes, do use it in Wallets, supposing it to be a wilde kinde of Rape. The Savens also called in *Otakē* Navens, in Latine Napus, in French Navet, in Italian Naop, in Spanish Nabica, in Dutch Stockruben, may be counted in the number of Rapes, for Rapes in some ground change into Savens, and in some ground, Savens into Rapes. These also love to grow in a well watered, mellow, and a rich ground: though such as grow in sandie and barren ground, prove often the sweetest in eating. They use to sow them in March, and in some places before, as also in August. *Parsnippe* in *Otakē* Parsnips;
carucaus, in Latine Pastinaca, in other tongues almost as in Latine, is very pleasant to be eaten, and requireth a fat and rich ground, and dayre digged, whereby the roote may have come enough to grow in: it is sowne and set in the Spiring, and in the end of Summer.

THRA. You have here also in this Gardened Carrats.

MARIVS. I have so. Yellow Carrats is called in Latine Siser, in French Chirville, in Italian Sisero, in Spanish Chirivias, in Dutch Querlin, I thinke you know it. Plinic witnesseth, that Tiberius was so in love with this roote, that he caused Carrats to be pretely brought him out of Germanie, from the Castell of Gelduba standing upon the Rhine. It delighteth in colde places, and is sowne before the halends of March, and of some in September: but the third and the best kinde of sowing as some thinke, is in August. There is also wilde Carrat, a kind of Parsnip, in Latine Daucus, in Italian Dauco, in French Carote savage, in Dutch Woortzel, there are that suppose it to be the yellow roote, that is so common in Germanie, they are to be sowne in March. It is generall to Rapes, Radishes, Parsnips, Carrots, Onions, and Lekes, that

Red & yellow Carrats

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Leekes.

they be well triste upon, or kept raw, to the end the rotes may ground the greater. Of Leakes there are two sorts, the one called Capitatum, and the other Sectum, which they use alwaies to cut close by the ground. The headed, or set Leake, in Latin Capitatum, in Italian Porro capitato, in Spanish Puerro con Cabeza, in Dutch Lauch in French Poireau, the other Leake in Latin Secta, in Dutch Schnidlauch, beside the often raking & dunging, must be watered as oft as you cut it downe. The seide in hote Countries, is sowed in Janarie or Februario, and in colder places, in March: to cause it to groine the fatter and the better. They use to knit up a good deale of sed together in shirre Linnen cloathes, and so to lay them in the ground: but to make them greater headed, when it hath well taken roote, they use to plucke it up by the blades, and raise it so, that as it were hanging and borne up by the earth, it is forced to fill the empty place that lies under it, the blades and the rotes cut off, they use to set the heads, underlaying them with g Tillehard, that when as they are not able to runne downe in length, they should be driven to grow in bignesse and breadth. The Leake delighteth in god ground, and hateth watry ground: sowed in the Spring, it must be removed or set againe after Harvest, that they may be the greater, the earth must be continually losed about it, and they must be pulled and tayled up, as I said before: if when you remove them, you make in the heads of every one a little hole with a pice of Riede, or any thing except Iron, and thrust therein a Cucumber seide, they will grow to a wonderfull greatnesse: some use in stead of Cucumber seide, to put in Rape seide. To have very large and great Leakes, you must allow a Creaste of Goats dung, and fill it full of Leake seide, for the little sprout at the first restrain so, will runne altogether in one, and so come forth of the ground: and this as Hieronimus Cardanus writeth, hath beene often tri-
ed to be true. They shall not savor of Leakes or Onions, that have eaten Cuminia after. It comineth up the tenth day after the sowing, and lasteth two yeare: the first yere it contenteth it selfe only with bearing of leaves, the next yere it riseth in a long stike hollow within, the top garnished with round knobs or knyfes. The Onion: in Latin Cepa, in Cope, in Italian Cipeall

Onions.

Cipolla, in Spanish Cebolls, in French Oignon, the next neighbour to the Leake: is also of two kindes, the one kinde called Capitatum, that groweth to head, the other Fissile, that without any head onely florisheth in blades, and is often gathered as Lettuce are: and therefore onely is sowne, and not set in February or March in faire weather, and in the wane of the Spone it delighteth in rich ground, well digged and tunged, and there, for Colquella would have the ground well fallained, that it may be mellowed with the Winter frosts, and after dunged, after well digged againe, and the cuttes and weedes cast out, laid out in beds and sowne: it is called Fissile, because it is part of a plant, and divided below, so in the Winter it is left with his top naked: in the spring time the blades are pulled off, and others come up in their places. The heades are set, and if you pluche away the Tayles and the outgrowings when you set them, they will grow to be very great. Twenty dayes before you set them, digge the ground well and lay it dry: & so shall they prosper the better. The heades are set in Autumne, and grow to serve another plants vntill you meane to gather the seedes, when the stalke is golome, you must prop it up with little stiches, that the winde shaking of the stalke, shaketh not the heade, and breaketh the stalke: which seede you must gather before it be all blacke, for the blacknesse is a true signe of the full ripeness: if you will not have it seen but heare, plucke off the blade still close by the ground, so shall all the maintenance goe to the root. Among all other heades, onely the Onion is not subject to the force of the Spone, but hath a contrary power, for it breedeth in the leane of the Spone, and breedeth in the increase of it: yet there are that hold opinion, that if you sow them in the wane, they will be the smaller, and sooner; and in the increase, they will be the greater, and the milier. The red onions are much stronger then the white they are best preserved in Water chaffed, if you dip them in hot water, and after dry them in the sunne, till they be through dry. They are of the common people thought to last longest, being hanged up in the smalke, for the kinnde is hard with the skinne. A proposito speake next of Carlike, Garlick, called in Latin Allium, in Italian Aglio, in French Ajo, in Dutch Knoblaich, in French Aux, it groweth with a blade

The second Booke, entreating

like the Onyon, but not hollow, the stalke round, and the flowres on the top in a round tuft wheresoever he groweth. Garlicke groweth both of the head and the scede, as the Onyon & other of this kinde doth. It is commonly sowed in February or March, according to the disposition of the weather, as the Onyon is. It should be set in the uppermost part of little narrow ridges, the Cloves being distant four or five inches one from the other, & not very deepe. After when the Cloves have put forth the little stings, or when their blaws are come up, they must be well raked, for the other ye do so, the greater they wil be: but if you will have the heads the greater, before it grow to stalke, you shall winde & wreath the graine blades together, & tread them to the ground, for that continual treading upon them wil make them the greater. In October the Cloves must be plucked asunder, & set in row upon high borders, that they may scape the danger of the winter stroynes. They say the scent of them will ease if you eat after them the rootes of Betis tolled at the site: thus saith Pliny out of Menander.

T H R A. What hearbe is that yonder, that commeth up so high as a man may make a staffe of the stalke, the leaves large and round, the flowres in shape seeming to compare with the roses.

Mallows.

M A R I V. It is Holcite, or Garden Mallow, in Latine Malus hortensis, in Dutch Poppel, in Italian & French almost as in Latino. And it is the same that Horace taketh to be so wholesome for the body, and which of Hesiodus & Martial is so highly commended. And which is more wonderfull, in it the leaves turne about with the sunne, so that it may serve instead of a Dyall, declating by the turninge of his leaves what time of the day it is, though the sunne do not shine, whiche the Philosophers think to be done by the heatting of his substance. In Africa, as Pliny walleth, it commeth in seuen moneths to be like a young tree, and serues well for a walkinge stalke. It is sowed in Dauber, or in the end of Summer, as also at other times, that by the coming on of winter, it may be rewaried of his high growing: it groweth in rich and moist ground, and

and must be transplanted when it commeth to have four or five leaves, if groweth best when it is young: when it comes to be greater, it dies in the comeling. We use it both for the pot and for sallets, the taste is better when it is not removed: you must sow it but thinne for growing too tanke, and in the midst of them, you must lay little cloes or stones, it requireth continuall taking, and maketh better the ground where it growes.

Next these I place Portulaine which is an excellent sallet herbe and labeth a sevill soyle, and though it may be sowne almost in any month, yet the warmest is the best, as April, May, June or September. Buck-ashes are an excellent measure for them or for any other sallet herbe, but above all they lobe vnde dust and house sweepings; they are apt to shew their scorne, whence it comes that a ground once possesse of them will sel-dome want them, they may also be removved, and will prosper much the better.

The Latines call it Portulaca, with the Italiens it hath the same name, in Spanish Verdolaga, in French and Dutch Portelle, it is sowne in Carnena, and well ordered doth grow the better, and spreatheth the farther, it hath a blacke scorne growing in little graine cups.

Buglose is at this day with the Portugallies called Boorage, though they differ something in the flowre, and in bery scorne, they are two sundry herbes: for some call the common Boorage, the lesser Buglose, and the greater Buglose is thought to be that which Dioscorides calleth Cleatum, the true Buglose: the floures of both sortes are used in Sallets and in Carnine, because it maketh the heart merry, and therefore is called in Greeke εὐπόρειον, that is to say, gladnesse: the leaves are also used in dressing of meates, it is sowne about March, and once sowne it will never abyde there is also a wilde kinde of it.

Next are Strawberries, whose leaves are an excellent pot herbe and the fruit the most holesome bettie, this herbe of all other would be set of the plant and not foliages, for the oft changing and consisting of it causeth it to grow bigger and bigger, whence it comes that we doe use to bring rootes out of

Strabocia.

the Woods, which being set and planted in the garden, prosper exceedingly two or three yeres together: and after, we either remoue them againe, because they ware wilde, or set the wilde in their places: and so have we them to yeld their fruit twise in a yare, in the Spring, and in the end of Sommer. And althoough it groweth of it selfe in shadowy woods in great plenty, as if it delighted in shadowe of Trees, yet being brought into the Garden, it delighteth in sunny places, and god orning, yelding a great deale more and better fruit: it crepeth upon the ground without a stalke with small strings comming from the root, with a white flosure, and a lease like a Cressole, indented about. The berries, which is the fruit, are red, and taste very pleasantly: the Dutch men call them Erdbeeren, the Frenchmen Frieses. There is another fruit that groweth something higher, whose berry is also like the Strawberry, Dioscoreides setteth to call it Rubus Idaeus, the Riper of Ida, because it groweth in great abundance upon the Mountaine Ida: It is full of prickles, as the other brambles are, but soft and tender, full of branches and whitish leaves, it beareth redde berries, something paler than the Strawberry, and very pleasant in taste. The Dutchmen call it Imberts, the Frenchmen Framboises.

Next this I place Liquerice by Lycoris so railed of the English who (for the small quantite they have growing) have the bell of all nations: In Latine Dulcis Radix in Italian Regaloria, in Spanish Regalica, in French Reculic, in Dutch Claries, or Sushuolo.

I gerthen very plentfull about the Rheeine, at west of young springs of the rike: as the Hoppe is, in dry light ground and sunne. Next this I place small Razines, called in Latine Riber, which we call at this day Riba, and the Dutchmen Saint Johns pearle, because about Hyslummeit it is garnished with red and rich berries, having a faire taste, quenching thicke chynny, the raging and extreme thirst of fevers, and coling the stomake, which the Apothecaries in Auger or Damp herte all the yeste. It is thought it was unknowne to the old writers: but now a common bath metter, for enclosing of Gardeins, and making of Borders and Arches: it will easily

Small Razines

grow, but that it is something troublesome, by reason of his
sharp prickles to be bent about sommer-houses.'

M A R C H . 4 . Melons (which some, because they are full,
ones like Apples, call Pommes) are of two kinds of Cucumbers,
and so are the Peperons, which the Frenchmen call Pompeons.

The Cucumbers are called in Latin Cucumber, in Italian Cu-
cumero or Godruolo, in French and Dutch Cocombre. Cucum-
bers.

They change to Pompeons, or Muskmillions, from which they ans-
wering differ in shape and greatness: when they exceed in greatness,
they become Pompeons, and when they grow round, they are
Melonpompeons: all these kinds are called by some writers
Melons. The Grecians call all the kinds, as well Cucumbers as
Pelongpompeons, by the name of Pompeons and Melons,
though there are some that make a difference between Pompe-
ons and Melons, neither doe the learned yet thoroughly agree
upon these names, nor can it be certainly said what kinds therein
implied round by Pompeons, and Pelongpompeons.

Pompeons doe crepe along upon the ground with rough leaves, and
yellow flowers, and are pleasant to be eaten when they are ripe.
The sweetest sort of them they call Succino, or Muskmillions.
The Melonpompeons are supposed to spring first in Campania,
being fashioned like a Quince. This kind hangs not, but
groweth round lying upon the ground, and being ripe, do leaze
the stalk.

Some Cucumbers are called Circini, of their yellownes when
they be ripe, and also Circoli, or Circoli, they grow all in length,
and are spotted as the Citrons are: some be called Marin, and be
called in Italian Cucufze Marin: the seide whereof is to be
witten before they be ripe: they are cut in pieces, and pottage made
of them, not much unlike in fashion to the Melon. There is also
another kind of Cucumber of a huge compasse, almost as big as
a bushell: the Spawlers and barbess folks in Italy, use to carry
great pieces of them to the field with them to quench their thirst.
You must set all these kinds in March, the sides must bee set
thinne, two fute one from another, in watrie ground well den-
gaged and digged, especially sandy ground: you must lay them in
spikes, or water and Honey, thus sayes: and after dye them
and set them, so shall you have them very pleasant. They will

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have a very sweet sabor, if their sides be kept many dayes among Roseleaves. Your Cucumbers shall be long & tender, if you set under them water in a broad vessell, two handfins under them. They delight in water so much as if they be cut off, they wil yet bend toward it, & if they hang o; have any stay, they will grow crooked, as also if you set oyle by them, which they greatly abhorre. The flowers being suffered to grow in pipes, do grow a wonderfull length. They lobe not the winter no more then both the Gours, whereunto they are almost like in nature: so the flowers, the leaves, and the claspers, are like of them both: but the Gourd is more busie in climbing, so that with halfe growth, it spreadeth quickly over the heches and summer-houses, running up by the walls, and mounting up to the very tiles of the houses, having a great fruit of a monstros bignesse: hanging by a small stalke, in fashion like a Peare, and greene in colour, although when it hath flowered, it will grow in what fashion you will have it: they say, there hath biene some of them nine foote in length. The round ones also grow to be used for great bottels: the rinde of the new ones, is soft and tender, but of the old ones hard, wherof when the meate is out, traubaliers make great bottels to carry drinke in. The Gourds that are used to be eaten in summer, are sundry in shape, some are round, some long, some broad: and though the fashon be divers, yet the nature is all one: so it is made by Art to grow in what shape you will, as in the forme of a creeping Dragon, or what you list: they are called in Italian Zumi, in Spanish Calabaz, in Dutch Kurbisch, in French Vne courge. The sines that the Gourd beareth next to the stalke (as Palladius saith) are longest, they in the middess round, and those that lie on the side, short, broad, and flat: if you set the sharpe end of the seide downward, as Columella saith, you shall have them both greater Gourds and Cucumbeers. It delighteth in a moist, rich, well swinged, & well watered ground. That which groweth without water, bringeth the pleasantest fruit: and that which hath water enough, needes the less looking too. The holes where they be set, must be digged a sole & a halfe daire, the third part whereof must be filled with straw, and then with god rich mould: it must be filled to the middest,

middest; then the sides being set, must be watered, till they be sprung, and after, earth laid to them still as they grow, till the *Gentians* be filled. They must be set thinneth foot a funder, it commeth up in five or sixe dayes after the setting. All hole that are set in this ground must be well watered, therefore they use to set by them certaine pots full of water, with rances of cloots in them to water them. When they be a little growen, they must have helpe set by them to climb upon, the longer they be, the better the plant. You must know there comes no winter into where you set them, for their substance doth greatly hurt them. Those that you keepe for slope, you must suffer to remaine upon the hale till Winter, and then gather them, and save them, either in the snowe, or in the frost, so otherwise the roots will rot and perishe. They will long be preserved, and continue fresh, if after they be savid, they be put into a close vessel with the bles of white wine, so hanged in a drayle of Winegar, so that they touch not the Wine, greeves and red Rym boy, and soe will keepe a good space.

Artichock.

Next those I plant the Artichock, in October. This is a kinde of Chiffell, by the diligence of the Carton, brought to be a good Garden veire, and in great estimation at Noblemen's tables; it is as you see, cramed with a comyn prickly head, having a great sort of flakas set in upon Chiffell. The Latines call it Strobilum, because the fruit of it something resemblieth the Pineapple. The Frenchmen call it Aricoculum of the Arabie artiche Al, and Cocalos a Pineapple, whereof it is abruptly called Artichoke, in Italian and Spanish Caro, in Dutch sometimes by the French name, sometimes Scobrin. It is called of Columells Cina, because in his gravinge, he chiefly delighteth in Asbes. The root is best sowne in March, and the sets in November: if you will have it yield fruit in the spring, you must besow much asbes upon it: it will hardly bear the first yere that it is sowne. Veraines that you set not the sets with the wrong end upward, for so shall your Artichock prove very little and evill favoured: It loveth good ground and well dunged, and prospereth best in fat ground. Palladius woulde haue you moreover, to set the sets in well watered beds, in the entrance of the spone, halfe a funder,

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flunder, and not always, but taking them in this of your Saffrons, thrust them before, till the earth come to the first leaves of your Saffron; then gather them towardly, and water them often, specially when the earth doth dry, you have the floweres first, when they grow up, they must be continually watered and dunged, as I told you at first. They say, they will lose their prettiness, if the tops of the foles be made bloud upon a stone before they be set; and so will they wither, if the foles be laid in spicke. You must have them transplanted into spicke, with Godes assistance, where, according to Euell, hee hath written, that lie upon the ground, and that which standeth upright, wch. 4. It may be sowne in October or November, the ground must not be frozen, for otherwise will it damage them all aduersely, yet if you are in plaine ground, and thereto to you to set them from Saffron growing plants, when that they have fles, for they doe so naturally, loise the earth, that you can hardly digge so much a hand, as will not take roote: if you set them from the fles, you must bee foyce to see, wch. standeth upright, and soe sowing, the fles shall be much larger and better. To sett them in October or November, in the ground, in the fles, wch. 4. Euell. What herbe is proper, somme that commeth up as it were bushes, with a blentle floures, and pale, bringyngh therto the colour of the fles, as it were, a little yellowe taylour, and so to turne off shadwe, in idoneous fles, as I told you.

Maximiliani. It is sowne, in October or November, in Latin Crewe, in Hispania and Scandia in Spanie Aerafron.

The nexte place of rearing care, are more southerly, Coridem, Sicily, or Cyrenia, supposing fleschet with great char-
ges, drouing and ministracion, and alowde to growe.

Maximiliani. There groweth great plentie of it in Germany about Spicke, and divers other places, which may com-
pare in goodness with any other place. It is set in spicke, or
the fleschet that it hath round, among Glouces, as the Lullies, the
Rhubarbe and the Rede Dauphine. Confounding alowde, that it may
be set of the roots, as some as the floweres are. The rates of
the herbes doe so increasse under the ground, that of one of them
some were springeth eighte or nine others. In many places
they are remoued every seventh or eighte yere, into better
ground,

118 The second Booke, entreating

little huskes white and round. It flowmeth twice a yere, in the spring, and in the end of summer: it is gathered from May till September, and it is good to plucke off the boime often, that it may not flower too much. In the higher parts of France it groweth wilde in such plentie, that there is almost no other feynell: it is in cold Countries in winter set in Cellars and hot houses, and is brought againe in the spring into the Garden. Note here yowre wisedome, that when you first bring it out, you keepe it from the March sunne, setting it in the shadowne, acquainting it helliche and little with the ayre: some use to house it with Rosemarye and Rose-brynges, and to leaue it in the Carnall Sage, in Latine Savry, as like in other languages, betwixt heathes sowne in strawe. When it is planted both of the feme, and of the flise, in March, in any kind of ground, it maketh no manner boimes: the garnesseyn to lay huckling abbes about it, leavynge it palpable the better. Used to drage, as Mints, in Latine Menta, in Dutch Mynt, in Italian and French, after the Ration, in the lande of Provence, it is planted and sowed in al thinges: on foyndaines, in ploughed hedes, and in wet gemes, and fowleth well by water. If you lacke foles, you may take the roots of the winter Sage, and let them take the space of a handbreadth, then fill them with earth, and let them stande in the sunne, and therewith drage them, propertely, till Latine Propertile, sowing both in the plough, and in the field: more fayrelye, without any gate, because the plant cometh in every place, in every ayre, in every ground, if it is planted out of the feme out of the flise: when to have beene taken red, it qualle not for the garnesseyn of winter Savorye, Latine Satureja, or Colomella latifolia, Cunila, in Italian Cnicella, Savorye, in French Savorie, the Dutch Kintewibetop, groweth in hercynie places, and to let anteflowers as the plants before. The next is that which commonly is called Basilill, in Latine Ocimum, in French Basilic, the Dutch Basilien, an herbe that is used to be set in the middest of knotes, and in hawes, for the excellent colour that

Sage.

Mints.

Pimpernel.

Mylop.

Savorye.

Basilil.

it hath: it is also good for the pot: it is sowed in March and April, and delighteth in sunny ground, you must put two saedes still together. Basill is best watred at none, whereas all other hearbs are to be watred in the morwing and in the evening, it may be removed in May. Theophrastus saith, that it prospereth best, when it is sowed with curcuses. Marjerum, in Latine Amaraens, and Maiorana, is also in like sort used: the Dutch and Marjerum,
 the Italiens call it after the Latine, the Spaniards Amoredus, the French Mariolaine and Thyn, in Greke of Dioscorides and Paulus Aegineta: this also for the pleasant sa-
 bouer it hath is set in pots and in Gardens: it is sowed in March
 thre or four seeds together, and halle a scote a funder, in May
 when it groweth to some heighth as Basill, it is removed.
 Time, nere of hindred to these, in French, Italian, and Dutch Time,
 like the Latine, in Spanish Tomillo, delighteth in Sonie, light,
 and sunnie ground: it springeth of the seedes and of the slippe,
 and also of the stowe, as Theophrastus saith. These thre ten-
 der and delicate Hearbes are to be sowed with great heed, ei-
 ther in earthen pots, or in Garden beds. Hitherto have I de-
 scribed unto you such Hearbs as serve for the ditchin: and be-
 cause the later sort are also esteemed for the labours, I will goe
 forward with the description of the rest that are set in Gar-
 dens for the pleasure of them, and for the labour doe garnished
 the said Gardens, and serue also for other purposes. Of Mose-
 marie I speake before, I will now procede with these that
 grow before my face. Lavender, called in Latine Lavanda, or
 Lavendula, that groweth in borders about the beds, and keepeth
 the Latine name in other tongues, both grow in wilde places
 and Sonie: it is sort of the slips, and removeth: it groweth to
 spike in June, and in July is gathered & tyed in bundles for the
 savour: it is distilled for sweet waters. Flowre gentle, in Latine Flowre
 Amaranthus, though it have no savour at all: yet hath it a de- gentle.
 lightfull beautie to the eye: the Frenchmen, for the faicenesse
 of the colours, excelling both Crimson and Purple in graine,
 doe call it Passeveleur, the Italiens Fiorveluto, because it con-
 tendeth in colour with Crimson in graine: it loveth to be often
 gathered and plucked, whereby it springeth the better: the
 golpes after they be dead, with a little water conie
 against

The second Booke, entreating
againe to their colour: it is called Amaranthus, because it by-
eth not.

Lavender.
cotton.

Myrtell.

Lavender-cotton: some call it Santonia, and saniale Southern-
woode; in Dutch it is called Cypressen, in French Cyprer: it grow-
eth commonly in Gardens, springing every yere. Myrtell, in
Latine Myrus, in Italian Myro, in Spanish Arabia, in
French Meurtie, in Dutch Welschedelber, the leates are not
much unlike the leaves of the Olive tree, something smaller,
with slender branches and leaves growing in order one by an-
other, as you see, with blacke berries, and leaved like the
Pomegranate. It groweth alwayes greene: it is set and
sowne both of the seede and slips, and the stache: but you must
dillie earth about it till it be thoroughly rooted. Some
sow the berries being a little beaten, and covered in fur-
rows of earth: it delighteth in continual weeding: so grow-
eth it to a handsome height, meete to shadowe hearebs: it loseth
to be watered with the Wine of men, or of shepe. This onely
is to be wondered at, that of the liquorum thereof alone, may be
made all sorts of Wine and Oyle: Cato teacheth to make
water of the berries, being dyed, and put in water and hong
soberen together: if they be not dyed, they come to Oyle; how-
the wine of them is made, Diocorides sufficiently declarath.
Plinic reporteth that Cato made three sorts of Myrtels, white,
blacke, and a thicke kind, that he calleth Toringale: it delight-
eth to grow by the sea bankes, as Servius saith, it groweth al-
this way commonly in Italy along by the sea roades.

I may not in this place forgett Salsie, whose seede is so pretious
and medicinable, it is hot and dry, it dissolueth humors and ob-
structions, and is very comfortable for breakes fromacks, it be-
lighteth in god and lame mouds, and is to be sowing in the height
of the spring onely.

Bext this I place Drogarie, which is also hot and dry, and ex-
cellent against any sicknesse of the Liver; the ground in which
it most joyeth, would be a little stony and full of Rubbish, yet
by no meanes unsanger: the moneth fittest for the sowing
of it is March and September, the moneth being in Libra, or any
other moist signe, it must be continually watered till it appere
above the earth but after sowing, for being once well
seed it is ever certaine.

White Poppy is Colde, and moist, and much probocheth
Waste, it would be solvne in a rich warme ground in the mo-
nethes of March, September and November:
Germanander is hot & dry and excellent against the Winge & bill,
Obstrucionis of the Specne, and hardnesse of vaine. It is an
herbe hearebe and will prosper in any ground, it is to be solvne
either in the Spring or fall of the lease, but if you set the Rype
it flourisheth the better, and it is most comely for the setting
forth of knots in Gardens.

Galecian is hot and dry, and preventeth infection, it helpeth
stitches and other grieses proceeding from windie causes, it lo-
beth to grow in moist and low places, the ground being well
manured, and till it be shott at least an handfull high, it must
be kept with continuall watring; The moistest time in the
yeare is the best to sow it in.

Pepperwort is hot and dry, yet of the two much more hot, it
is good against all kinde of Aches and other paine in the
joynts, & sinewes; It delighteth in a rich blache Sopyle, sat and
loose, it would be solvne in Februarie, and removed in Septem-
ber.

Philipendula is very hot and dry, and is good against abor-
tive Witches, Stone, Strangury, or any greefe proceeding from
cold causes; it may be solvne in any barren, stony or gravelly
soyle, in the monethes of May, Apill or September; it
neither desirith much needing nor much watring, but
being once committed to the ground appeareth sodainly.

Lastly, and which is not infectioure, but rather superior to any
before going, I place the blessed Thissell, whiche the Italians
call Cardus-Benedictus, it is hot and dry and very soveraigne
against most inward sicknesse, especiall fevers and infections; it
launcheth bloud, and is a great comforter of the brygne, it de-
lighteth in a rich ground and a loose well tempered mould, it
must be solvne very shallow and not covered above two inches
diepe; the first quarter of the moone is the best time to sow it
in, and in the moneths of March, May or September; if you
sow alittle fine flaxen Wheat with it, most assuredly it will
prosper much better.

T H E A. Oh what sweete and goodly Gellflowers are here! Gellflowers,
you

You may truly say, that Salomon in all his princely pompe, was never able to attaine to this beauty: some of them glister with a perfect Crimson dye, some with a deep Purple, and some with a passing beautifull Carnation: I marauele the old writers knew nothing of these in their time.

M A R I V S. There are some that suppose it to be a kind of Garden Betonie, which the Gardner fetching out of the field, and chussting Cloves into the rootes of them, with diligent planting, have brought to this excellency: others thinke it to be called Veronica of the Spaniards, who first found it. Some think it to be Ocnanthe, because it groweth with the Vine: it delighteth in warme sunnis ground: it is solwed seldomes of late, but commonly set of the clippes, as I said of Rosemary. The Gardners in the end of summer, doo take the rootes and set them in Pans, Pots, or Pailes, and when the frostes come, they carry them into their Cellars, and in large warme dayes dryng them abroad againe, and suffer them to be now or then watered with the raine. It hath borne often seene, that in such vaults or cellars they have flowered all the winter long, through wantenesse of the place: some set bou ghs about them, and cover them with straws and horse-dung, to preserue them against the cold: it often happeneth that one roote beareth one pale white flower and red, and the other speckled or Carnation.

Thus much for the opinions of the Ancients; but because the English are at this day the onely excellent Masters of this most excellent flower, I will therefore rely onely upon their opinions: and they affirme that Gillifloweres are of divers kindes; some single as Pinkes, Tetall-gillifloweres, and all sorts of Gillifloweres that are sowne from the seede; some double, as the Carnation, the Stannell, the Clove-gilliflower, the Dover, the Granado, the Queens-gilliflower, the Bandileir, the Christalline, and a world of others, which are of all other flowers most sweete and delicate. All but the Tetall-gilliflower love good fertile earths, and may be sowne either in March, July, or August, they are better to be plantes of clippes than sowne, yet both will prosper. They are very tender, and the roote so pleasant that the woxmes will destroy them, and thence it comes, that they plant them in earthen pots and halfe tubbs, which at

your pleasure you may remeke from the sunne to the shadwe; and from theoughnesse of somes to places of shelter: they groe up high on long slender stalkes, which you must defend and support with square cradles made of splintered bassas, leane the wind and the waight of the flowers beake them. The white Gilliflowres you may make of any colour you please, as if you would have them of a purple colour, then lay the stalkes in shape in the lies of red wine, and after their soowing water them with the same lies; if you will have them of a scarlet red, you shall put Alermion betwene the rinde and the small heade growing about the roote; if you would have them blew, you shall dissolve Sauge or Wille betwene the rinde and the head; if yellow, then dissolve Opmunt, if greene, dissolve Mercurie grease; and thus of other colours. Now if it please you to have them of mixt colours, you may also by grafting of contrary colours one into another, attaine your desife, and you may with as great ease graft the Gilliflowre as any flower whatsoever, by ioyning the knots one into another or twisting the stalkes one into another, and then wrapping them about with a little soft cleaue like of the same colour you would have the Gilliflowre, and covering the place close with a little soft red waxe well temperis; and you shall understand that the grafting of Gilliflowres maketh them exceeding great, noble and most excell ent of colour. Note if you will have your Gilliflowres of dyvers odors if you will have your Gilliflowres of dyvers odors smellis, you may doe it in this manner, take two of thise great Cloves and cleape them downe and boile them in Damaskerose water, then take them out and boile them, and put them into a fine saucy cheareage, and set them about the root of the Gilliflowre piece to the setting on of the stalke; and so plant it in a fine soft and fertil mould, and boyle it with the rosewater wherein the Cloves were boyled, and the Rose which springeth from the same will have suddainly a mixt smell of both clover and the Rosewater, that is will shewe both delight and wonder. If in the same maner you take a stickes of Cynamon and cleape it in Rosewater, and then boyle it and bind it as aforesaid, all the flowers will smelle strangely of Cynamon. If you take Cloves they growe not sprake, and mist it with Rosewater

Dropses of Damaskine rost asafet, and binde it as aforesaid: the flowers will smell strongly of spause, yet not too hot or offensive by reason of the extraction of the mole water; and in this sort you may doe with Ambergrise, with Benjamint, with Saffron or any other sweete drugges whatsoeuer. And if in any of their confectiones before named, you steepe the seeds of your Gilliflowers, fourte and twentie houres before you sow them, they will take the same dimensio[n]s in which you steepe them, onely they will not be so large or double as those which are replanted or grafted.

Of the Wall-gilliflower. Now for your Wallgilliflower, it delighteth in hardy gilliflower. Rubbish, lime and stone ground, whence it cometh that they covet most to grow upon walles, pavements and such like battaine places; it may be sowne in any moneth or season, for it is a sorte of that hardynesse, that it makes no difference betwixt summer and winter, but will flourish in both equally and beareth his floweres all the yere, whence it comes that the husbandman prefers it most in his garde[n], for it is wonderous sweete and affordeth muche honye: It would be sowing in herbe small quantitie, for after it have once taken roote, it will naturally of it selfe spreade muche ground, and hardly ever after be rooted out: it is of it selfe of so exceeding a strong smell and so sweet, that it cannot be forced to take any other, and therefore is ever preserved in its alone nature.

To preserve Gilliflowers. Now for the preservation and increase of all other Gilliflowers (before spoken of) which care of a tener and curiositie nature, and because the floweres are more dearely worth more than a singel pence, therefore it is good that you observe both in the spring, and at the fall of the leafe, or at any other time when the flower is therell in its haunches, to plucke many as conveniently you can without hurting the plant: then in a heliotropis for the purpose in some drye place where the sunne commeth as liethens may be, and plant them so thicklye close together as may be, for they will plater over the hill, whose which you so plantes in the fall of the leaf, you may sowinge the spring and plant them

them in your knotes, Borders or any other other perpicious place, and those you planted in the spring you may remove at the fall, and if any of your elder roses have by decay as the sunne is wonderous pernicious unto them, then you may at any time from this stroe of young Impeis supplye the place, and keape your Garden ever florishing.

The Helitropion or floodes of the Sunne is in nature and colour like other Englishy Marigoldes, whiche it is exceeding huge in compasse, for many of them will be twentie and sease and twentie inches in compasse, according to the fertillnesse of the soyle in which they grow, and the oft re-planting of their rootes, they are exceeding godly to luke on, and pleasant to smell; they open their floweres at the rising of the Sunne, and close them againe at the Sunne setting: it delighteth in any soyle that is fertile either by arte or nature, and may be sowne in any Moneth from Februarie till September.

The oft planting and replanting of the root after it is sprung a handful from the roote, maketh it grow to the uttermost bignesse: it would have the East and West open upon it, ones in some small penthouse to keape the sharppesse of the winde from it".

TH R A. Loe, yonder are Roses growing in Borders, and made in a maze: doe they grow of the seede, or of the set?

M A R I V S. Roses, called in Latine Rosa; and in all other languages as in Latine, are diversly planted, sometime of the rootes, sometime of the branches, being cut in small sets, and planted a scote asunder. Some wreathe them in Garlands, and so set them to have them smell the pleasanter. The use of sowing of them is best: howbeit, they will very well grow of the seede, though it be long ere they spring, and therefore they set them of sets a scote in length; it neither delighteth in rich or moist ground, but is well contented to grow amongst rubbish, and under walles. The places where they must grow must be digged deeper than Coyne ground, and not so deepe as the Vineyard: the Rose is rather a Thorne then a plant,

and graimesth upon the bery bhambles : it commeth first out in
 A little buds and long shaphe hearn, which after they be opened,
 It doth clothe it selfe & doth spreadeth aboue, with a y. low heary
 fulke in the midst. Pliny maketh mention of sundry sortes of
 them : one sooth he calleth Milesia, having an Orient and fiery
 colour, another Alabandica, with white leaves, and Spermonia,
 the basest sort of all : the Damaske and the White, are used for
 Churche waters : they differ in toughness, prickles, colour and
 smell. There are that have but only five leaves, & others with an
 hundred leaves, neither good in beauty nor in small: the rough-
 ness of the rinde (as Pliny sayth) is a signe of the fauour.
 There are some little pale ones, called Carnation and Ro-
 vincars, these do wonderfully grow where they once are plant-
 ed, and have a most excellent fauour. Roses are used to be set in
 February, which is either done with the seed, or the set planted
 in little furcoes. The seedes (as Palladius sayth) are not the
 littile yellow things in the midle of the Rose, but the graines that
 growes within the red riped Berry : the tipenes whereof is
 deuided by the swarthinesse and the fastnesse of the berry: where
 they once are planted, they continue long, and after they dy, they
 send out new buds and sprays. If you lacke sets, and would
 of a few have a great number, take the branches that begin as
 it were, to shew their buds, and cutting them in sundry sets,
 soure or five fingers in length, set them in good ground well
 danged and watered : and when they be of a yeres growth, take
 them up and set them a sole asunder, praine them and trimme
 them with often digging about them. Roses must still be cut,
 for the more you cut them, the thicker and the doublet they
 grow, otherwise they will ware single and wilde, it will also
 doe them good sometime to burne them : being removed, it
 springeth very sone and well, being set of sets soure fingers
 long and moxe, after the setting of the seauen starrs, and after
 removed in a Westerly winde, & set a sole asunder, and often
 digged. The old Rosyars must have the earth loosed about
 them in February, and the dead twigges cut off, and where they
 ware thinn, they must be repayed with the young springes.
 To have Roses of fine sundry colours upon one roote, make
 when

Muske
Roses.

If hen they begin to buren, a fine hole beneath in the stocks under the ioynt, and fill it with red colour made of Wysell sod in water, and thrust it in with a cloath, and in the like sort put into another part of the stocke greene colour, & in another yellow, and what other colours you will, and cover the holes well with Dre young and Lome, or very god earth. If you will have your Roses heare betimes, make a little trench of two hand-breadths round about it, and poure in hot water twice a day, and thus doing, (as Democritus promiseth) you shall have Roses in January. You may preserue Roses before they open, if making a slit in a Rabe, you enclose the blossome, & when you would have fresh Roses, take them out of the Rabes; others put them in Earthen Pots close covered, and set them abroad: the Roses continue alwayes fresh that are ript in the Eggges of Oyle. If you will have them at all times, you must set them every moneth, and dung them, and so (as Didymus sayth) you shall have them continually. To cause them, or any other floweres to grow double, put two or three of the seedes in a Wheat straw, & so lay them in the ground. If you set Garlick by your Roses, they will be the sweter: the drier the ground is where they grow, the sweter they will be, as it appeareth by the season of the yere, for some yeres they are sweter then others: the Rose will be white, that is smaked with Brimstone, when it beginneth to open: amongst all Roses, those are most to be commended, that they call Carnations and Provincials. The Oyle of Roses was greatly had in estimation even in Homer his time, and at this day the Vinegar of Roses is greatly used. Next unto the Rose in worthinesse, for his savor and beautifull whitenesse is the Lilly. The Crackes hold opinion: that it sprang first of Junos Milke sprinkled uppon the ground. In February we begin to set Lillies, or if they grew before, to loose the earth about them with a rake, taking god heed that the young tender shoothes about the roote be not hurt, nor the little head, which taken from the old roote, be set for new Lillies. As the Roses are, so are the Lillies, the sweter, the drier the ground is where they grow: Lillies and Roses being once set, continue both very long.

128 The second Booke entreating:

There are red Lillies made so by Art, for they take the stalkes and rootes of the Lillie, and hang them in the smoake till they wither, and when the knotes begin to wane, they are layd in sparch in the Lyes of red wine, till they be covered, and then set in the ground, with the Lyes poured about them, so will they come to be purple; and indeede as you alter the colour of the Gilliflower, so you may change the complexion of any Lilly.

Violets.

There are sundry sortes of Violets, both of kinde and colour, but the smelling of them is in a manner all one.

Beardfoote
or Setter-
wort.

Hect 3 place Bearefoote or Setterwort, and there are two kindes of it, the blacke and the white. The roote of the Beare, sote they thynk through the eare, or into the heale of the beast, that is either diseased in his lungs, or hath the Purcen. Columela semeth to call it Consigillo: it groweth not in Gardens, ex- cept it be sowne, it continueth long, and lobeth cold and moisty ground.

Angelica.

There standes, not farre from that, another very noble heare in Whistche called Angelica. His roote, because it is a soueraigne remedy against the plague, and hath divers other god operations, it is cherished in our Gardens, and being once sowne, it commeth up every yere: it groweth also wilde in the mountaine Countrey, and flowzeth in July and August. Here is also Helicampana, this also is set in our Gardens for medicines sake, and we make much of it for the roote, it groweth wilde in the hilly Countys, and dry shadowy places. In Summer the roote is taken out of the ground, and cut in small pieces, and so dried: at this day it is called Enula campana: it hath a yellow flower, a lease like Mallin, but white and hoarie at the one side.

Helicam-
pana.

Wormewo-
od.

Savine.

Worme-
wood; though it grow in every place, yet this that you see here is Romane or Pontiske Wormewood; this kinde is set in our Gardens, and thought to be the best. Savine which we have here also in our Gardens, for divers diseases of Cattell, hath leaves like Juniper or Cypress, alwayes greene, there are two kindes of it, one like the Tamariske, the other like Cypress: it is a bush rather spreading in breadth, then growing in height: the Berries which he beareth, may be gathered in the end of Summer, or at any other time.

Here

Here is also Valerian which is hot and dry, and preventeth infection, it helpeth stiches and other greeves proceeding from winter causes, it loeketh to grow in moist and low places, (the ground being well manured,) and till it be shot at least an handfull high, it must be kept with continuall watering; the moistest time in the yere is the best to sow it in.

This quarter I kepe for outlandish flowers, which although they are more for beauty and glorie then use or smell, yet are they such an ornament to the garden, and so pleasing to the eye besides the raritie and strangeness, that the Garden is held imperfect which is deprived of them, the number of them is like their colours hardly to be numbered, therefore I will trouble your eares but with the rehearsall of some few of the most principall which I account the Crowne-emperiall, the worthiest of all floweres both forraine and homebred, it is the delicatest and strangest; It haile the shape of an emperiall Crowne and will be of divers colours according to the art of the Gardner, in the midde of the flower you shall see a round pebble stand, in proportion, colour and Orientnesse like a blewe naturall pebble, onely it is of a soft liquid substance. This pearle if you shake the flower never so violently will not fall off, neither if you let it continue never so long, will it eyther increase or diminish in the bignesse, but remaineth all one, yet if with your finger, you take and wipe it away, in lesse then an houre after you shall have another arise in the same place and of the same bignesse; this pearle if you tast it upon your tongue, is pleasant & sweet like honie; This flower when the Sunn ariseth you shall see it looke directly to the East, with the stalle bended low thereunto, and as the Sunne ariseth higher and higher, so the flower will likewise arise, and when the Sunne is come into the Meridian or Noone point which is directly over it, then will it stand upright upon the stalle and looke directly upward, and as the Sunne declineth so will it likewise decline, and at the Sun setting looke directly to the West onely. The seedes of this flower are very tender, and therfore woulde be carefullly sowne in a very rich and fertill Earth, scolt broken and manured. The seasons most mate for the same is the latter end of March, April, or May, for the floweres flourish most in May, June and

July. As soon as it is sprung an handfull abobe the earth, yo shall remoue it into a fresh mould, and that will make it flourishe the bader : The roote of this flower is like an Apple, or great flat Onyon, and therefore in the replanting of it you must be carefull to make an hole large and fit for the same, and to fise the mould gently and close about the same : In the winter it shinketh into the earth, and is not at all to bee discerned, by meane whereof I have sev're divers (supposing it to be dead) to digge up the earth, and negligently spoyle the roote; but bee not you of that opinion, and in the Spynge you shall see it arise and flourishe bately.

The Du-
lippo.

Next to this I place the Dulippo or Tulippo, which is but a little shott of the Croone Imperiall in pleasantnesse, beauty, and rarenesse, soz you may have them of all colours whatsoeuer, in such sort as was shewed you for the Gillyflowers, Lillies, and other roses ; they are tender at the first, springing from the seede, and therefore must be sowne in a fine rich mould in the warmth of the Sunne, either in March, April, or May; but after they are once sprung above the ground, they are reasonable hard, and will defend themselves against most weathers. The roote of this flower is shap'd like a Pease, with the biggest end downewards, and many small thrids at the bottom, therefore you must be sure when you rem ove or replant it, to cover all the roote in fresh mould, and let not any part of the white thereof be uncobered. This flower by honestly replanting, you may have to flourishe in all the Spynge and Summer Monthes in the yare; so in the dead of winter it shinketh into the ground, and is not at all to be perceiv'd. The stalks of these flowers are weake, therefore to support and defend them from the shakings of the winds, you must make little cradles of small sticks in such wise as you did so the Gillyflowers.

The Nar-
cissus.

The Narcissus is a very curions & dainty flower, and though his much variety & alteration in growing, they are supposed to be of divers kinds, but it is not so, so in as much as they are seene to be of divers colours, that is but the Act of the Gardener, as is before expell in other flowers; & whereas some grow single, some double, & some double upon double, you shal understand that such as grow single, grow simply from the seede onely; those which

which are double & no more, are such as have beene planted and replanted, the small thidcs of the rootes being clipt away, & nothing being lost about it that is superfluous ; & those which are double upon double, are the double plants grafted one into another. This flower loveth a rich warme soyle, the mould being easie and light : It may be sowne in any Month of the Spring, & will flourish all the Summer after : Before it appeare above ground, it would be oft watered, but after it skils not how little, so it will defend it selfe sufficiently. Not unlike unto this are your Daffadills of all kinds and colours, & in the same earths & seasons delighteth either to be sowne or planted, & will in the same manner double and redouble his leaves. Many other so, raigne & strange flowers there are, but the order of their planting differeth nothing from these which I have already declared, being the most tender and curious of all other; onely I wil advise every skillfull Gardner, that when he shall receive any seed from any foraigne Nation, to learne as neare as he can the nature of the soyle from whence it commeth, as hot, moyl, cold, or dry; and then comparing it with his owne, sowe it as neare as he can in the earths in the seasons that are nextest to the soyle from whence it came; as thus for example. If it came from a clime much hotter than his owne, then to sow it in a sandy mould, or other mould made warme by the strength of Manure, in the warmest time of the day, & in thole Months of the Spring which are warmest, as April or May : you shall let it have the sunne freely all the day, & at night with mats, penthouse, or other defence, shield it from sharpe winds, frosts, & cold dewes.

If I have scene diverse Noblemen, & Gentlemen (which have
been very curious in these dainty flowers) that have made large
frames of wood, with boards of twenty inches depe, standing
upon little round wheeles of iron, which being made long,
square, or round, according to the Masters fancy; they have filled
with choyce earth, such as is most proper to the flower they
would have grow, and then in them sowe their seeds or set
their plants, in such sort as hath beeene before described,
and so placing them in such open places of the Garden,
where they may have the strenght and violence of the
sunne

An excel-
lent advise.

A new
manner of
planting
and trans-
porting
flowers and
fruits.

sunne all the day, and the comfort of such moderate shouers as fall without violence or extraordinary beating, and at night draw them into some low vaulted Gallerie ioyning upon the Garden, where they may stand warme and safe from frostes, windes, frosts, dewes, blastings, and other mischeives which ever happen in the sunnes absence. And in this manner you may not onely have all sortes of dauntie foxraine flowres, but also all sortes of the most delicate fruities that may be, as the Orange, Lemon, Pomegranate, Cetheran, Cinnamon, Almond, Dlyne, or any other from what clime soever it be derived, obseruing onely but to make your frames of woode (which containes your earth) deeper and larger, according to the fruite you plant in it, and that your Alleyes through which you draw your Trees when you house them, be smooth and levell, least being rough and uneven, you sogge and shake the rootes with the waight of the trees which is dangerous.

Also in these frames of woode I have knowne whole Gardens of fruities and flowres conveyed beyond the Seas, as from England into Denmarke, from Italy and Fraunce into England, and so to other Nations.

Now for such flowres or fruits as shall be brought from a colder or more barraigne ground then your one, there needeth not much curiositie in the planting of them, because a better euer bringeth forth a better increase; onely I would wish you to obserue to give all such fruities and flower the uttermost libertie of the weather, and rather to adde colenesse, by shadows, then increase any warmth by reflection, as also to augment Showres by artificiall watring, rather then to let the rootes dry for want of continuall moisture*.

THAR. But many times we see Gardens be destroyed with wormes and vermine, what remedy have you for this?

MARIVS. Of the faults of the ground, and the remedy theress, as the amending of either too much moisture or drynesse: I speake in the beginning, touching wormes, Flies, and other vermine that annoy the Gardens, which for the most part are these, Caterpillars, Snailers, Moles, Mice, Gnats, and Antes. There are that say, that if you mingle with your sades

leaves soote, or the Juice of Houseliche, or Singren, the Caterpillers will not meddle with the herbe that springeth of such saede: and that they will doe no harme to your Trees, if you sprinkle them with the water wherein the ashes of Vines hath bane laid: moreover the stalkes of Garliche made in bundles, and burnt iu Orchards or Gartens, destroyeth the Caterpillers. They will not breed (as they say) if you burne about the rootes of your herbs or Trees, quicke brimstone and lime: the same they report of Lie made of the Figtree. Ants will not annoy your come or hearbs, if you encompasse it round with Chatke, or put into their hilis the ashes of burnt Snailes, and if some of them be taken & burnt, the rest will not come neare the labour: if Assa foecida be laid in Oyle, and powred upon their hills, it utterly destroyeth them; they will not touch the trees nor the hearbs, if you annoint the stalkes with bitter Lupines, or lime laid with oyle. You must shake off the Caterpillers in the morning, or late in the evening when they be numbered: also water wherin Dill hath biene sodden, cast about the Orchard when it is colde, destroyeth them. It is witten, that if you set Chiches about your Garden, Caterpillers will not breed, and if they be already bred, you must sarch the juice of Wormewood, and cast among them. The dung of Will. Graas.
 lackes burnt upon the coales, destroyeth Gnats: the like also bath brimstone: a sponge wet with vinegar ar ranged up, draweth also swartnes of Gnats unto it: also a maw of a cheape new killed, not washed nor made cleane, if it be laid in the place where Moths, or other such vermine doe use, and covered a little the upper part, you shall after two dayes finde all the nosome vermine crept into it: thus must you doe thrise or thrise, till you thinke you have destroyed them all. Of killing and driving away Moles, Sotion the Greeks witteneth, that you must take a Nut, or any like fruit, making it hollow within, fill it up with Chasse, Rozen, and Brimstone: afterward stoppe the bent holes that the Mole hath in every place, that the smoake breaue not out, onely leaving one open, wher you shall lay the Nut, in such sort as it may receive the winde on the backe part, that may drive the smoake into the Mines; there are also traps to be made, for the destroying of Moles: a
Moles.
 flame

Mise.

Garden
Flies.

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Thunder
and light-
ning.Todes and
frogs.The greene
fly.

frame is to be set upon the new Hills, with a piece of wood hollow and framed, that it may receive (as it were in a Sheath) another piece of wood made in fashion like a Unise, to this is ioyned another little sticke that lieth in the hole, and is fastned to a Catch without, that as soone as the Hole toucheth the sticke within, shae is taken presently, as it were, with a payre of Sheates. Mise are taken, if yee pouze into a platter, the thickest mother of Dyle, and set in the house a night, as many as come at it are taken: also the roote of Bearefoot mingled with Chese, Bread, flowre, or grease, killeth them. Tarte and very sharpe Vinegar mingled with the juice of Henbane, and sprinkled upon the Hearbes, killeth the Fleas, or little blacke wormes that be in them. No kinde of vermine will annoy your Hearbes, if you take a god sort of Crefishes, and cast them in an earthen vessel with water, suffering them to worke abroad in the Sunne for the space of ten dayes, and after with their liquor sprinkle your Hearbes. Next these or rather greater then any before going, is the offence of Thunder and lighting which in a Moment killeth all sorts of flowers, plants, and Trees even in the height of their pride and florishing, which to prevent it hath bene the practise of all the ancient Gardiners to plant against the wals of their Gardens, or in the midst of their Quarters where their choyest flowers grow, the Laurell or ~~any~~ tree which is ever held a defence against those strikings.

Next I place Toades and Froggs, which are exceeding populous and great destroyers of young plants, chieflie in their first appearing above the ground; and the ancient Gardiners have used to destroy them by burning the fat of a Stagge in some part of the Garden Beds, from which Earth all creatures that have poison in them will flee with all violence, other Gardeners will watch where the Byte pearcheth on nights, and gathering up her dung scatter it upon the bedds either simple, or mixt with the shavings of an old Harts horne, and no venemous thing will come neare it.

The greene Flye of all flies is held the worst, and is most gracie to hurt Herdes and plants, therefore to destroy him take Henbane leaves, Houseleake and Mints, and beat them in a Morter

of the order of Gardening.

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soother, then straine forth the iuyce and adde thereto as much
Winegar as was of all the rest, and therewith sprinkle your
Bedes all over, and the Crane flie will never come nere them:
Some hold opinion, that if you plant the hearbe Aret in your
Garden, that it is a safe preservative against these grone flies;
for it is most certainte thyt the very smell thereof will kill these
and most sorts of all other flies what ever, as hath beene
found by approved experiance and the sytes of old ancient Abby
Gardens, - hich a man shal seloome finde without this hearbe
planted in them.

Mothes or Moaights are very pernicious in a Garden, for Mothes.
they destroy both seedes and plants, and there is no better or
more certainte way to kill them, then by taking cold hors
holes and burning them, with the smoake thereof to perfume all
the places where they abide, & it will in an instant kill them.

Cankers are a kinde of filthie wormes which devoueth both
the great and small leaves of all sorts of sweete plants, especi
ally Lettuce, Cabbadge, Coleflowers and such like, and the
way to destroy them is to scatter amongst your plants Goose
dung, or to sprinkle the iuyce thereof with a wisse of Rue over
all the beddes: and though some with a custie knife, use to scape
them from the leaves, and so kill them on a tileheare, yet for
my part I hold this the nearer way, and both more certainte and
more easie. Thus I have shewed you the perfection of my
Garden which was perfected with much labour, long experiance of
time and not a little cost, I will now deliver you a little tracte
on Method how to the entertainement of any great person in
any parke or other place of pleasure, to make a compleat Gar
den in two or three dayes.

T H A R. God hit procede.

MA R I V S. If you shall entertaine any noble personage to
whomre you would give the delight of al strange contentement ei
ther in parke or other remote place of pleasure, nere unto Ponds
river or other waters of clearenes, after you have made Arbours
& Summer Bowers to feast in, the fashon whereof is so common
that every laboer can make them, you shal then make out your
Garden plot, bestowing such sleight fence thereon as you shal
thinke fit; then cast forth your Alleys and devide them from the
Quarters by paring away the grone swarth with a paring
spade

spade finely and even by a dices line, then having stoe of labourers, cast up the quarters, then breaking the mould and lebelling it you shall make sad the Earth againe, then upon your Quarters you shall draw forth either knots, armes, or any other devise which shall be best pleasing to your fancies, as eyther knots with single or double Crayllis or any other emblematical devise, as Birds, Beasts and such like; and having trenched those devises prettie deepe, then in stead of hearbes to set in them, take greene sods of cleane short grass, and cutting it proportionably to the knot, lay them into the trench and joyning sod to sod close and artificially, you shall set forth your whole knot or the portraiture of your armes or other devise; and then taking a cleane bosome that hath not sometyme bene sweeped withall, you shall bush all uncleanesse from the Grassle, and then you shall behold your knots as compleat and as comely as if it had bene set with hearbes many yeres before. Now for the portraiture of any living thing, you shall cut it fourth joyning sod unto sod, & then afterward place it in the earth: now if in this plot of ground (which you make your Garden) there be eyther naturall or artificiall Mounts or Bankes, then upon them you may in the selfesame sort with greene sods set forth a sight eyther at the field or River, or the manner of hunting any chasse, or any historie of other devise that you please, onely in working against Mounts and bankes you must obserue to have many small pinnes to stay your wazie and keepe your sods from slipping one from the other till such time as you have made every thing fast with earth, which you must ramme very close and hard. As for folwres or such like adozements, you may (if the time of the yere serue) the moring before remoue them, with their earth, from some other Garden, and plant them at your pleasure, or otherwise you may adorne it with artificiall folwres made of hoynes and such like stuffe and usuall to be bought in many places, as also artificiall frutes made of Bladders, paper or palls and coloured unto the life. Now if you will adorne this Garden with divers colours eyther to distinguish armes, knots, or the earth it selfe, you shall thus make your colours; first for yellow it is eyther made of yellow clay usually almost to be had almost in every place, or the yellowest

white sand, or for want of both of your flanders stile which is to be bought of every Glazemunger; or Chamerier, and any of these you must beat to dust; white you shall make of fine Chalke beaten to dust, or of well burnt Plaster, or for necessarie of the whitest Lime, but that will soone decay; Blache is made of your best and purest charcole dust well cleaved and sifted. Red is made of hyphen uselesse well burnt Witches beaten to dust, and well cleaved from spots; blaw is to be made of white Chamie and blacke cold dust mixed together, till the Blache hath brought the white to a perfect Bleuemesse. Lastly Greene; both for the naturall propertis belonging to the Garden, as also for better continuance and longlasting, you shall make of greene haws, or Camomile well planted where any such colour is to be used: as for the rest of the colours you shall sitt them and sow them in their proper places, then with a flat beating bastell you shall fire it fast upon the face of the earth.

There be other wares of beautifying Gardens, as to distingue the knots either with Tilehearts, with the shankstones of shape, and other small cattell, with great Coggesstones, and a world of other things like unto these*. But I kepe you long in this ill-savour'd Garden, if it please you we will walke into the Orchard adioyning.

Both the Garden and the Orchard as you see are inclosed with Of O-
fereall hedges and ditches, whereby they are defended from chards,
durtfull beasts and unruly folks (as I told you at the first) when
I began to speake of the encloing of Gardens and Orchards.

Some doe graue and spire of themselves; a number of others againe are to be sowne. Those that grow wilde without the laboure of man, doe bear their seedes each one according to his kinde: but those that are set and drazed, doe yield greater increase. There are divers against that are almyghty grenes and doe never lose their leafe, whiche are (as Coockayne reporteth) those, the Date, the Orange, the Lemon, the Certon, the Bay, the Olive, the Cypresse, the Pine, the Holly, the More, Myrtle, Cedar, and Juniper. Also for stranges trees, and those that will growne no tubers but at home, the will not meable twithall: the will
therefore begin to think those that yield vs fullness, & bear fruit,

138 The second Booke, entretaining

fruit, and those are divided into three sortes : for either of the three they comes to be **Wines** as the **Dame** is, or else **Chambers** as the **Wilke Dame**, or neither **Wine** nor **Chamber**, as the **Wine**.

THA. I desire to heare your opinion of every sorte, for I thinke it no small skill to plant such faire Gardens, Orchards, and Vineyards. Methinkes you have used a wonderfull good order, that amongst your Wines, you have intermedled **Orchardfruits**, **Figgetrees**, **Almonds**, and **Appertos**, and that you have seuered your Orchard from your Garden, & your Vineyard from them both, with faire hedges and ditches.

MARIVS. It was neidefull so to doe, least my folks labouiring in some of them should come into the rest, contrary to my pleasure. First, if you will, I will speake of those that bring us fruit, and then of the wilke, and the other of setting and planting of Woods. First (as Columella saith) that ground that serveth for an Orchard, will serue for a Vineyard, as you see it both here, and if the ground be hilly, rugged, and uneven, it is more meete for a Vineyard than for an Orchard. If therefore you will make an Orchard, you must choose such a ground as is meete for it : a rich ground, level, and lying upon the southe, which when you have found, you must well enclose it : as I taught you before in the enclosure of Gardens, that it may ly out of danger of Cattell and knaves : for although that the trampling, and bunging of Cattell, is not unprofitable to the Trees, yet if they be either bruised or broken whiles they be young, they will soon come to nought. When you meane to dredge your Orchard place thus fenced, you shall make your furrows a yare before you plant them, so shall they be well season'd with the Sunne & the raine, and whatsoever you plant, shall the sooner take. What if you will make plaine the same place that you make your furrows? Let the furrows be made at least two moneths before : after all then full of straw and set it on fire. The yeaþer and winter that you make your furrows, the fairer and more fruitful will your trees be, and the fruit the better. Many furrows must be made like an oven, or furnace, wider at the bottome then abobe, that the root may spread the better, and the cole in winter find the heate in summer, may the better be kept from it, and also in drye grounds, the earth shall not be easily be heaved away. In setting

How to
make an
Orchard.

of your fruitrees and vines, you must place them in order, by that ^{order} of hechachise, or ^{particular} which need full order of setting, is not anely profitable, by receyving the ayre, but also very beautifull to the eye: when as in which way soever you looke, you shall see them stand in ranks, and which also is to god purpose, for the Trees shall equally receive their moisture from the ground.

I have used two sortes of this ordered order, one wherein my Trees stand foursquare like the Chequer or Chessboard: the other not in square as the first but Losing-wise or Diamond-wise, like the glasse windows or glass. You must frame it according to the nature of the trees, leane the lower to the bounnes of the higher. You must also set them a good distance asunder, that their branches may spread at pleasure, for if you set them to thicke, you shall be able to folw nothing betwixt them, and they will be the lesse fruitfull. Wherefore Palladius would have the space betwixt them, thirty fote at the least: There is more profit in the generall disposing of them, entermeeling the greater with the lesser, so as the great ones doe not awy their underlings, either with their shadowe or droppings, so that they grow not equall to them in strength or bignesse. Pomegranates and Apples must be sowne nearer together, as nine fote asunder, Apples nearer then they, and Peares nearer then them both: but of them there are sundry sortes. Almonds and Figges must also be set nearer. And because there is a naturall friendshyp and love betwixt certain Trees, you must set them the nearer together, as the Wine and the Olive, the Pomegranate and the Apricell. On the other side, you must set farre asunder such as have mutuall hatred among them, as the Wine with the Ribet and the Bay. There are some of them, that desire to stand two y fone together, as the Chestnut: the droppings also do great hurt of all sortes, but specially the droppings of Oaks, Pine-trees, and Spelthornes. Moreover, the shadowes of divers of them are hurtfull, as of the Walnut tree, whose shadowe is unwholesome to men, and the Pinetree that killeth young sprynge: yet they both resell the winde, and therfore are best to be set in the ouer-sides of the Orchards, as hereafter shall be said. Of the place & the order, perhaps you thinke I have said enough, and looke that I shoulde proceed to the order of planting and setting.

Dropping
of trees.

Friendshyp
amongst
Trees.

Shadowes
of Trees.

Time of
planting.

Time for
grafting.

The ob-
seruation
of the
Moone.

The kinds
of plan-
ting, and
grafting
of trees.

Three
kindes of
Grafting.

What
trees are
best to be
grafted be-
twixt the
bark and
the wood.

What
trees a-
gree best
together.

Understand then the chiefeſt time of planting (as Florentine ſaith) is the end of Summer, for then is nature moſt occupied about the rafe, as in the Spring about the upper parts: and therefore grafting is moeſt in the Spring, and ſetting in the end of Summer: for the plants are waſered all the Winter, & therefore it is beſt ſetting or planting, from the ſetting of the ſeaſon ſtarts, until the twelfth of December. In the Spring time, you may ſet thoſe things that you forgoſt before: at what ſeafon ſoever it be, looke that you ſet them in the afternoon, in a faire weſterly winde, and in the wane of the Moone. Pliny ſaith that this note is of great impoſtance for the encrease of the Tree, and goodneſſe of the fruit. If the tree be planted in the encrease of the Moone, it groweth to be very great: but if it be in the wane, it will be ſmaller, yet a great deal more laſting.

We plant either by Grafting, ſetting of the hewell, or the ſtone, ſetting the rotes, ſtockes, o: ſlips, grafting betwixt the Barkes and the Tree: ſome are planted in ſome of theſe ſorts, other in all. In Babylon (as they ſay) onely the leafe ſet, comes to be a tree: firſt I will ſpeak of Grafting, and then of the reſt. There are that appoint but three kinds of Grafting, betwixt the bark and the wood, in the Stocke, and implaſteering, o: inoculation. The firſt ſort they call Grafting, the ſecond imbuſhing, the third inoculation, o: imbuſding. Such Trees as haue thickeſt barkes, and draw moſt ſappe from the ground, are beſt graffed betwixt the bark and the wood, as the Figge, the Cherie, and the Olive: thoſe that haue thin rindes, and content themſelues with leſſe moſſe, as if the ſappe leaving the bark ſhould gather it ſelfe to the heart, as the Denge tree, the Apple tree, the Wine, and viuers others, in theſe it is beſt to open the Stocke, and graffe the wood. Some Trees are alſo beſt Grafted upon other ſome, the Figge that prospereth beſt upon the Mulberry Stocke, and the Plane tree: the Mulberry upon the Chestnut, and the Beech, the Apple, the Peare, the Cleme, and the white Poplar, wherein if you graffe, you ſhall haue your Mulberries white: upon the ſame Stocke are graffed the Pears, the Quince, the Spedler, and the Herbife: the Peare upon the Pomegranate, the Quince, the Mulberry, and the Almond. If you Graffe

Graft your Peate upon a Mulbery, you shall have red Peates: To have the Apple is Grafted upon all Pearre Stockes, and Crabsets, red Peates & Apples, Willow, and Poplart: being Grafted upon the Quince, it bringeth sooth the fruit which the Greeks call Melimella: it is also Grafted upon the Plumtree, but being Grafted upon the plane tree, it bringeth sooth red Apples. The Medlar being Grafted upon the Thorne, the grasse groweth to great bignesse, but the stocke continues small: upon the Pine-tree, it bringeth a sweet fruit, but not lasting. The Peach grafted in the Thorne or the Birch, groweth to be very saice, and great: the Almond and the Peach being joyned together, and grafted in the Plumtree, will beare a Peach with an Almond in the stone. The Filbert will onely be grafted in the Wilding, not in it, agreeing with any other. The Pomegranate delighteth in divers Stockes, as in the Willow, the Bay, the Ashe, the Damson, the Plum, and the Almond, upon all which he prospereth well. The Damson groweth very well upon any kind of wilde Peare, Quince, and Apple: the Chestnut liketh well the Walnut, and the Birch. The Cherry refuseth not the companie of the Peach, nor the Turpentine, nor they his: the Quince will well be grafted upon the Barberie: the Pettile upon the Hallow: the Plum upon the Damson: the Almond upon the Filbert: the Citron, because of his tender tree, and thinne rinde, will scarcely beare any other grasse, and therefore contenteth himselfe with his owne branch. The Vine that is grafted upon the Cherry tree (Florentius promiseth) will beare Grapes, & grafted upon the Olive, which bringeth forth a fruit that bearing the name of both his parents, is called Elrostaphilos. In fine, all young Trees that have sap in the bark, may be grafted: if it be greater, it is best grafting were the vnde, where both the bark and the wood, by the reason of the niceenes of the ground are full of sappe. He then that will graft either in the stocke, or betwixt the stocke and the rinde, let him gather his graftis from a scutfull tender tree, and full of ioynts, and out of the new spring, except he meane to Grafte an old tree, when as, the sturdier Graftes be, the better they are, otherwise the last shotes of such trees as have lately boorne will be the best. You sing, must gather them on that side the tree that lyeth upon the

A Peach
with an
Almond

Olive

grape.

The choice
of Graft-

ing.

South: others like better the East side than the Southwest. Ver-
gill forbiddeth those that groweth on th: top, thinking them
better that growes out of the side. To be short, your grasse
must be full of buds, lately growne out, smoothe, the rinde
smoothe, god, and readie to grow: they must be of the last
yeres growth, which is knowne by the knots or synts, that
decalte every yeres growth. Beside, Grasses of all tree's are not
to be gathered alike: for Vines and Figge tree's are dryest in
the middle parts, and take best of the top, and therefore from
thence you must gather your Grasses. Olives are fullest of
sappe in the midle, and the outer parts dryest. Those best agree
together, whose tindes are nearest of nature, and doe blossom,
and beare both about a time. You must gather the grasses in
the wane of the Mone, tenne dayes before you Gresse them.

The knots.

The time
of grafting.The man-
ner of
grafting.

Constance addeth this reason. That it is neare the Gresse doe
a little wither, that he may the better be receaved of the stocke.
You must appoint your grafting time in the spring, from March,
when as the buds doe begin to burgen, but not come out (al-
though you may graffe the Peare when his leaves be out) un-
till May: for Grafting in raine is profitable, but not for im-
branching. The Olive, whose springs do longest bud, and
have much sappe under the barke, the abundance whereof doth
hurt the Gresse, must be Grafted (as Florencine sayth) from
May till June. Columella would have the Olive Grafted from
the twelfe of March, till the first, or the first of Aprill, and the
time of Grafting to be the Mone increasing, in the afternoone,
when there bloweth no Southwinde. When you have found a
good Gresse, take your knifs (being very sharpe) and pare it a-
bout thre fingeres from the synt downeward, so much as shall
be miecte to be set in the stocke: that part that is under the synt
(not perishing the pith) you must cut with your knife, as if you
should make a pen, so as the wood with the wood, and the barke
with the barke, may synte together, as fast as may be. Whiche
being done, if you meane to graffe in the stocke, you must first
sative it smoothe, then cleave it in the midle with a sharpe knife,
about thre fingeres: and to the end you may handesomely put
in your Gresse, you must have a little wedge of wodde or iron.
(Pliny thinkes it better of bone) which wedge (when you will
graffe

graffe betwene the rinde and the stocke) must be made flatte on the one side, and round on the other, and the Grafte must be pared also flat on that side that must stand next the wood, taking alwaies good heed , that the pith be not perished : the other part must onely have the rinde pulled off, which after you must set in the cleft, or betwixt the bark, till you see all parts agree together. Some doe cut the point of their Grafte thasquare, so as two sides are bare, and the other covered with his bark: and in that sort they use to Grafte in a stocke one against another : but it is thought best to Grafte no more but one. When you have thus set in your Grafte in the stocke, plucke out the wedge : but here is a great carefullnesse , and heed to be used ; and therefore good Grafters, thinke it best to hold the Grafte even with both hands, least in the binding and pulling out of the wedge, the Grafte be hurt, or stand uneven. For avoyding of which, some use foy to binde the stocke about, and after to put the wedge, the bands keeping it from opening too wide. The harder they be set in, the longer will they be ere they beare, but will indure the better : you must take heed therfore, that the cleft be not too slacke nor too straight. When you have thus Grafted , binde the stocke with a swig, and cover it with loame, well tempred with chasse, two fingers thicknesse , and (putting mosse round about it) lye it up so, that there come no raine at it, nor be hurt with the sunne or the winde. This is the order both in the old time, and at this day used : though in Colurellas time (as it appeareth) they were not wont to Grafte, but onely betwixt the bark and the wood: for the old people (as Plinie writeth) durst not as yet meddle with cleaving the stocke: at length they presumed to make holes, and Grafte in the pith, and so at last waxed bold to cleave the stocke. Cato would have the stocke covered with clay and chalke, mingled with sand and Oxe-dung, and so made in morter. Sometime they Grafte with the top of the Grafte downeward, and they doe it to make a little tree spred in breadth. It is best Grafting next the ground, if the knots and the stocke will suffer : and Plinie would have the Grafte grow forth not above sixe fingers. If you will Grafte a little tree, cut it nare the ground, so as it be a foote and a ^{your} halfe high. If you would carry your Grafts farre, they ^{To keep} will

will longest kepe their sappe, if they be thrust into the roote of a Rape : and that they will be preserved, if they lye betwix two little guts, running out of some River or fish pond, and be well covered with earth. Now for inoculation or implastring which is no new manner of grafting, we finde that it was used of the Latines, and the Greeks, when taking off a leafe or little bud, with some part of the rinde with him, we graft it into another branch, from which we have taken as much bark. This order (Columella saith) the husbandes in his dayes were wont to call Implastring, or Inoculation : and before Columellas dayes Theophrastus in his Booke De causis Plantarum, doth shew the reason of Inoculation. Plinie doth say it was first learned of Dawes, hiding of siede in caves and holes of Trees. This kinde of Grafting, as Columella doth write, and our Gardeners themselves confess, is best to be used in summer, about the twelfe of June : yet Didymus saith he hath Grafted in this manner, and hath had good increase with it in the spring time. And sith it is the daintiest kinde of Grafting, it is to be used in all Trees, but onely in such as have a strang, a moyst, and a sappe rinde, as the Olive, the Peach, the Figge, the Apple, the Peare, the Cherry, and divers others trees which are full of milke, and have a big bace. Of that Tree that you meane to Graft, chose the youngest and the fairest branches you can, and in them take the bud that is likeliest to grow, and marke it round about two inches square, so as the bud stand even in the midle, and then with a sharpe knife cut it round about, and draw off the rinde, taking good heed you hurt not the bud, and take out the piece. Afterwards, goe to the Tree you meane to Graft on, and chose likewise the fairest branch, and pare away the rinde a little space, and boynce in your buds full, as the rindes may agre together so close, as neithir water nor wine may enter in. You must looke that you hurt not the wood, and that the rindes be of one thicknesse. When you haue thyn done, binde it up, so as you hurt not the bud : Then clay it ouer all, leaving libertie enough for the bud. Cut off all the syng that growes about it, that there be nothing left to draw away the sappe, but that it may onely serue the Graft : After one and twentie dayes, unclay it, and take off your

of the ordering of Orchards.

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your covering, and you shall see your bud incorporated in the branch of a strange tree. Columella speaketh of another sort of Grafting, to bore a hole in a Tree with an Augre, either to the pithe, or the uttermost rinde, going something loopewise downward, and getting out all the chips cleane, take a Wine, or an arme of the best Wine, not cut from his old mother, & pating away the over rinde, thrust it fast into the hole, being all moist and full of spaffe, leaving a bus or two onely upon it: afterward, stoppe the hole well with spoule and Clay, and commit it to the earth. In this sort you may Graft Wines upon Trees, so shall the branch live, being both nourished with the old Mother and the new Father. Two yeres after, you shall cut off the new grafted branch, and the stocke wherin you grafted, you shall sawe off a little above the boxing, so shall the grasse become the gre atest part of the plant. The like doe our Countrymen, taking a branch of a Witch a ffeare thiche: and when they have cut it, and boxed it, they set in it the branches of the best Peare or Apple that they can get, setting the same in a very wet ground in March; and in the same yere the yere after, taking up the Witch, they cut it asunder with a saw between the holes and the branches: and every piece of stroke with his branch, they set in very rich and fatifull ground. There are some that bing of another kind of grafting, not much unlike to the former, whereof notwithstanding, Africam in Constantine maketh mention, as tried in a Peach. They will a man to take the branch of a Willow as big as your arme, and two Cubits in length, or more: this they would have you to bore though the midle, and after slipping off the branches of a Peach as he stands, leaving onely the top untouched, they would have you to make the Peach passe through the Willow bole, and that done, so bole the Willow like a belo, setting both his ends into the earth, & so to binde the hole up with messe, mortar and bands. The yere after, when as the head of the Peach hath joyned himselfe with the pith of the Willow, tht both the boles are become one, you shall cut the Tree beneath and remoove it, and raise up the earth, so as you cut the Willow bole with the top of the Peach; & this shall bring you Peaches without bones. This kind of Grafting must be done in most plas-

Wimble
Grafting.

Another
Grafting.

Propagation, and his
kindes.

ees, and the Willlowes must be holpen with often watring, that the nature of the Treæ may be of force. The kindes & man-
ners of propagation, are declared by Pliny, who telleth of two
kindes: the first, wherein a branch of the Treæ being bowed
downe, and buried in a little furrow, and after two yéeres cut off,
and the plant in the third yéere removed: which if you intend to
carrie any far distance off, it is best so, you to buntie your bran-
ches in Baskets, or earthen vessells, in which you may aptlyest
carrie them. And another more delicate way he speaketh of,
which is to get the roote out of the very Treæ, laying the bran-
ches in Baskets of earth, and by that meanes, obtaining rootes
betwixt the very fruit and the tops, (for by this meanes the root
is fetched from the very top, so farr they presume) and from
thence fetch them, using it as before: in which soþ you may also
deale with Rosemarie and Savine. Columella sheweth a way,
how slippes of all manner of Treæs may be grafted in what
Treæs you list.

TH R A. And some are also set of the slips, or siblings: my selfe have plucked a branch from a Pulberrie Treæ, and bunting the end a little with the Hallet, have set it in the ground, and it hath growne to be a faire Treæ. The like hath beeene tryed (as they say) in Apples and Peares.

MARIUS. You say well, for Nature hath shewed us, that the young scences, plucked from the rootes of the treæs will grow: the youngest are best to be planted, and so to be pul-
led up, as they may bring with them some part of their mo-
thers body.

In this soþ you may plant Pomegranats, Filberts, Apples, Herbliss, Medlars, Ploms, Figges, but specially Vines, and sometimes Cherries, and Spytilles. Of the stroke and the branches are also planted the Almond, the Peare, the Pul-
berry, the Drenge, the Olive, the Quince, the Ivie, and the Turkish plome: which the oftner you remove them the better they prove. Pliny sayth, the branches cut from the Treæ, were at the first onely used for hedges; Elder, Quinchers, and Wilers medled together: afterwards for use, as the Poplar,

the

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the Alver, and the Willow; at this day we set them where we best like. Hēde must be taken, that the stockes, or the sets be of a god hinde, not crooked, knottie, nor sozed, nor slender then that a man may well gripe with his hand, nor lesse then a fote in length.

THRA. It remaineth now that you speakes of the setting of the fruit or kernel.

MARIVS. Nature (as Pliny saith) hath taught us to set the kernel, by the sides devoured of Birds, and moistned with the warmth of their entrails, and after boide in the boughes and rīses of Trees: wherby we finde many times a Plane Tree growing out of a Baye, a Bay out of a Cherry, and a Cherry out of a Willow. Many Trees are set of the fruit, kernel, or stone, which grow rarely of themselves, by reason of the falling of the fruit: as Chestnuts, Hazelnuts, and Walnuts. Columella saith, they are the fruitfuller Trees that spring of their fruite, then those that are set of the stocke, or the branch. Some delight to be set in Trees, and not in the ground: when they have no soyle of their owne, they live in a stranger. Of the fruit are kernill, or planted Nuts, Almonds, Pistaces, Chestnuts, Damsons, Plums, Pineapples, Dates, Cyprisse, Bayes, Apples, Pears, Maples, Fiftrees, Cherries, Peaches, & Abicotches: but set or planted they prove to be the hindlier. Some of these doe grow in Grafting and other wayes: experience teacheth, that the Nut and the Kernill are Grafted; and Demageron witnesseth as much: neither are all fruits, kernels, and stones set in like sort, as hereafter shall be seene. Some are laid in water before, others not: some lye there dayes in hony and water, and at the fall of the leafe are buried in the ground till March: and then set Nuts are onely lyes in moist dung a day before, and of some in water and hony onely a night, least the sharpenesse of the hony destroy the sprout. Some are set with their topes standing upward, as the Chestnut: others downward, as the Almond, though this is not greatly to be regarded, sith we see the fruits that fall from the Tree, or is let fall by Birds, both prosper best of any other.

Here, the ordering of an Impo Garden may not be of impe
passed Gardens.

passed over, wherein as in a parke, the young plants are nourished. And because the Sunne sometimes ought to be kindest, & tenderer than the Soother, a māte ground must be chosen for the purpose: that is, a ground dry, fat, and well laboured with the Hattocke, wherein the stra. get may be wel cherished, and very like unto the soyle, into which you meane to remoue them. The kernels, or stones, must not be altogether naked, but a little covered with some part of the fruit, so shall they afterward endure the longer. They must be set a fote, or thereabouts asunder: After two yeres they must be removēd: & because their rootes haue runne very deepe into the ground, they must be iomewhat bent, or turned in, to the end they may spread abroad, and not runne downeward. Above all things, you must see it be free from stones and rubbish, well fenced against pouerty, and not full of chinkes, and clifts, that the Sunne burne not the tender rootes: they must be set a fote & a halfe a funder, that they hurt not one the other with their iure growing. Among other evils they will be full of wormes, and therefore must be well taken and weeded: beside, growing ranke, they must be trimmed and pruned. Cato would have them covered over with Lattises upon forkes, to let in the Sunne, and to keepe out the cold: Thus are the kernels of Peares, Pine-apples, Nuts, Cypresse, & such others cherished. They must be gently watered for the first three dayes, at the going downe of the Sunne, that they equally receiuing the water, may open the sooner. Zizipha, or Turkey Plumbs, Nuts, Walnuts & Chestnuts, Bayes, Cherries, Pistaces, Apples, Dates, Peares, Naples, Ficces, Plumbs, and diverse others, are set of the stonye, or kernels. In removing of them, haue speciall regard, that they be set in the like soyle, or in better, not from hot and sooward grounds, into cold & backward, nor contrary from those to the other. You must make your furrows so long before, if you can, that they be overgrown with good mould. Magio would have them made a pere before, that they may be well seasoned with the Sunne, and the weather: & if you cannot so, you must kindle fires in the middest of them two monthe's afore, and not to set them, but after a shōwe. The depth of their setting must be in litle clay or hard ground, thicke Cubites: and so plumb trās a handfull more. The furrow must be made furmace like, straight above, and boade in

the bottome: and in blacke mould, two Cubites and a hand broad, being square cornered; never deeper than two fote and a halfe, nor broader then two fote broade, nor never of lesser depth, then a fote and a halfe, which in a wet ground will draw neare the water. Such as delight in the depth of the ground, are to be set the deeper, as the Alshe, and the Withe: these and such like, must be set four fote depe, the others it sufficeth if they stand thre fote depe. Some use to set under their Trees round little stones, both to containe, and convey away the water: others lay gravell underneath them. The greater Trees are to be set toward the North and the West, the smaller toward the South and the East. Some will have no Tree remov'd under two yeres growth. Cato resisteth Virgils authority that it is to great purpose to marke the standing of the Tree, as it grew at the first, and to place it towards the same quarters of the heaven againe. Others obserue the contrary in the Wine, and the Figge tree, being of opinion that the leaves shall there, by be the thicker, and better defend the fruit, & not soone fall: beside, the Figge tree will bee the better to be climbed upon. Moreover, you must beware that by long farryng, the rootes bee not withered, nor the winde in the North when you remoue them, whereby many times they dye, the husband not knowing the cause. Cato condemmeth utterly all manner of windes or stormes, in the removing of Trees, and therfore it is to great god purpose to take them up with the earth about them, and so cover the rootes with a Turf, and so this cause Cato would have them to be carried in Baskets filled with earth up to the toppe: the Tree must so be set, as it may stand in the middest of the trench, and so great hiede must bee taken of the rootes, that they be not broken, nor mangled.

Among all Trees and plants, the Vine by good right chal- The Vine, lengthth the sovereignty, seeing there is no plant used in his-
bandry more fruitfull and more commodious than it, not onely for the beautifullnesse, and gaudiness of the fruit, but also for the easinesse he hath in growing, whereby he refuseth not al-
most any kinde of Country in the whole world, except such as
are too extreamly storched with the burning heate of the sunne,

as else too extremely frozen with the vehement cold ; prospering also as well in the plaine and champion Country, as it doth upon the hilly and Mountains Countrey : Likewise as well in the stiffe and fast ground, as in the soft and mellow ground: And oftentimes in the Loamy and leane ground as in the fat and fogge, and in the dry, as in the moist and mity; yea, and in many places, in the very Rockes it groweth most abundantly and most fruitfully, as is to be seene & prooved at this day about the River of Rhine in Germanie, and the River of Mosell in France : and above all this, it best abideth and beareth the contrary disposition of the heavens.

The invention
of the
Vine.

It was first found out by the Patriarche Noah, immediately after the drowning of the world : It may be, the Wine was before that time, though the planting and the use therof was not then knowne. The Heathen both moſt ſallily and very fondly, as in many other things, doe give the inuention of the ſame unto the God Bacchus. But Noah lived many yeares before either Bacchus, Saturnus, or Vranus were borne.

The Vine-
yard most
gainfull.

There wants not great and learned men, that affirme the Wine to be moſt gainefull : and declareth that olde fruitleſneſſe of the Wines, mentioned by Caro, Varro, & Columella, which upon ebery Acre yelded ſeven hundred Gallonds of Wine, and the Vineyards of Scenca, wherein he had neare upon one Acre 1000. Gallonds: when as in Corne ground, Pasture, or Wood land, if a man doe get upon one Acre xx. s. a yare, it is thought a great matter.

The ordering of the Wine-bearing Wines, as the ſorts of Wines are sundry, neither can they be contained in certaine numbers, ſo there is as many ſorts, as therer is of ground. Homer giveth the chiefeſt p̄ayſe to the Wine of Meronia, and Praenium. Virgill moſt commendeth Rhenish wine : others the wine of Amini, Lametana, Cendy, and Coricga, but I meane to ſpeakē of thoſe tha' are commonly in our daies. In Italy at this day they make moſt account of wine of Corfega, Romani, & Meylina. In Spaine they beſt eſtēme the wine of S. Martine, of Ribodari, and Gibralter. In French the greatest p̄ayſe is given to the wines of Orleans, Anjou, & Greves: Germanie began but ſlately to meddle with planting of Wines, ſay Varro myſtath, that

the Frenchmen and Germanes had in his time both Vines and Olives; but at this day the Rhine, the Necker, the Mene, Mosel, and Danaw, may compare with any Countries, for gardens of their Vines.

The Vines may be planted fiftie sundry waies: for either his branches are suffered to runne in safety upon the ground, or else without any stay grow up right, or having a stay or prop set for them, they climbe up by it, or else runne up by a couple of stiffe props, called of Lycie a yoke, or else sustained with soute of those yokes, which of the resemblance that they have with the hollow gutters of a house, are said to be guttered: others againe suffered to runne upon stanes like Arbours, serving to sit under, and are called Arbour Vines: others runne by the walles of houses. Moreover, the yoaked Vines, are tyed together, and joyned with thre or soute props, as if they were yoaked: some doe let them tuane upon trees, as commonly in Lumbardy, they are suffered to climbe upon Elmes, Willowes, and Iches, where they greatly prosper: neither doe they like all manner of trees, for they hate the Nut tree the Bay, the Radish, and the Coll: as againe they love the Poplar, the Elm, the Willow, the Figg, and the Llyne tree. The Vines that are yoaked, or stayed up with props, receiue more ayre, and beare their fruit the higher, & ripe the better, but aske more trouble in the looking to: and these are so ordred, that they may be plowed, whereby they are the mo: fruitfull, because they may the oftner, and with the lesse charge be tilled. The Vines that creep upon the ground, make much Vines, but not (as Columells saith) so good.

Trees
which be
friends or
foes to the
Vine.

THUR A. Now to your ordering of them.

MARIUS. First, I will speake of the ground, and of the digging of it, and after of the planting and cutting of them. And first you must take for a speciall note, that every Vine will not agree with every place, nor yield his vayne in like goodness, of such force is the qualitie of the ayre, neither will all kindes of ground serve: for Columella doth counseile to set the Vine in a wilde ground, rather then where Corne or bushes haue growne: for as so old Vineyards, it is most certaine, they are the woorst places of all other to set new in, because the ground

The orde-
ring of
Vines.

What
ground is
best for
the Vine.

is matted, and as it were netted with the remaines of the old rotes: neither hath it lost the poison of the rotten and old skinning Notes, wherewith the soile (glutted as it were with venime) is benummed: and therefore the wilde and untilled ground is chiesely to be chosen, which though it be over-grownynge with shrubbes and trees, may yet easily be ridde. If such wilde ground be not to be had, the best is the plaine champion land without trees: if neither such a ground, then the light and thin bushie ground, or Olde ground. The last and woorst (as I said) is the old rotten Wineyard, which if necessarie compell you to take, you must first rid the ground of all the old rotten rotes, and then cover it either with olde dung, or with the newest of any other kinde of manuring: the rotes being thus digged up, must be laid up together, and buried. Other must the ground be considered, whether it be mellow and gentle: It is thought to be god, that is something gracie and gravelly, and full of small pebbles; so that it be mingled with fat mould with ill, which if it be not, is utterly disallowed.

Dame Ceres joyes in heavy ground, and Bacchus in the light.

You shall perceive it to be massie and thicke, if being digged, and cast into the hole againe, it riseth over: if it scarcely fill the hole, it is a signe that it is light and thinne. The Flint, by the generall consent of husbandmen, is counted a friend to the Wine, specially where it is well covered with god mould: for being cold and a keeper of moisture, it suffereth not the rotes to be scalded with the heate of sommer: so much that Columell doth use to lay certaine stones about the side of the Wintrees, so that they exceed not the waight of five pound a piece: which as Virgill hath noted, keepes away the water in Winter, and the heat in sommer.

Hurle in the shirke stonye, or therein throw the nastie shelles. So do we sic the banks of the Rhine being full of those stones, to yield an excellent god Wine: but the stones that lye above ground, are to be cast away: for in the sommer, being heated with the sunne, they burne the Wine, and in the winter they hurt them with their coldness, contrarie to those that lye in the bottome. But the best of all is the soile of an hill, which receiveth the falling mould from the topes, or the bally,

bally, that with overfloowing of Ribers hath biene made rich. Neither is Chalkie ground to be refused, though the Chalke of it selfe that Potters use, is hurtfull to the Wine. The hungry sandy ground, the salt, bitter, and thirkie ground, is not meete for the Wine: yet the blacke and reddish sande, medled with some moist earth, is of some allowed well enough. Moreover, neither ground to hotte, or too colde, too dry, nor too moist, too slender, nor too stiffe, that will not suffer the raine to sinke, is to be used for Wines; for it will easily gape and open, whereby the Sonne comming in at the craues, doeth burne the Rootes: That againe which is overthinne, letting in as it were by vents, the Raine, the Sunne, and the Winde, both drye up the moisture of the rootes: the thickne and stiffe ground is hardly to be laboured, the fat ground subiect to too much rankenesse, the leane ground to baccennesse; wherefore there must be an even temperature amongst these extremities, as is required in our bodies, whose health is preserved by the equall medlie of heat and colde, dryth and moysture, fulnesse and emptiness, or thickenesse and thinnesse: neither yet is this temperature in ground for Wines so justly to be evenes, but that there is required a more inclining to the one part, as that the earth be more hot then colde, more drye then moist, more subtil then grosse, specially if the state of the Heavens agree. Against what quarter thereof the Vineyard ought to lye, it is a vnde controversie, some like best the rising of the Sunne, some the West, some the North: Virgill mislikeith the West: others againe thinke the best lying to be upon the South. But in generall, it is thought best in colde Countries, to have it lye toward the South, in warme Countries upon the East, in hot burning Countries, as Egypt and Barbarie, upon the North. Plinie would have the Vine himselfe stand towards the North, and his springs, or shoothes towards the South. A fit ground and well lying, being found out, must be diligently digged, dunged, and weeded: all unprofitable weeds must be pulled up, and thrown away, lest they shoulde spring againes either corrupt the young plants, or hinder them therafter. The Vine is planted according to Virgil's rule, in the fall of

What
quarter of
the heaven
the Vine
must lie in
against,

154 The second Booke, entreating

The time
for planting
of Vines.

of the leafs, but better in the spring, if the weather be rainy, or cold, or the ground be fat, champion, or a marshy valley: best in the fall of the leafs, if the weather be dry & warme, the ground dry and light, a barren, or a rugged hill. The time of planting, in the spring (as Columella saith) endureth forty dayes, from the 30th of February, until the Equinoctial: and in the fall of the leafs, from the 30th of October, to the Kalends of December. Cæsar in Constantine, being taught by experience, saith, in watry grounds you shal rather plant in Autumn, when the leaues are faine, and the plants after the vinterage deliuered of the burden of their clusters, sound and strong, before they be ripped with the frost, or then they best agree with the ground, nature applying her selfe wholly to the nourishing of the roote. The time of grafting, Columella saith, is of some extended from the first of November, to the first of June, till which time the stocke of graft may be preserved: but it is not well liked of him, who rather woulde have it to be done in warmer weather, when the winter is past, when both bud and rind is naturally moued, and is safe from cold, that might annoy either the Graft, or the Stocke: yet he granteth (when hastes requireth) it may be done in the fall of the leafs, when as the temperature of the ayre, is not much unlike to the spring: for which purpose, you must chuse a warme day, and no wind stirring. The Graft must be round and sound, not full of pith, but of buns, & thicke of joynts, the Len of wherof must not exceede thre inches, and smoth, evenente: the Stocke and the cleft must be well closed with clay and melle. Those that grow toward the south, must be mached.

What
Grafts to
be chosen.

The like is to be done with all other Trees. Of plantinge Vines, there is two wayes, the one of the Root, the other of the branch, or spray: The Root is counted a great deale better then the branch or set, by reason of the forwardnesse, & vantage the branch, in that it hath alredy taken root. The Root is set in faine ground, well digged and laboured, in a trench of thre foot, thefe of sprays, in a gentle and mellow ground: in dry ground, is neuer good to set the Root, no; the Branch in a dry season, is best to plant in the fall of the leafs in a hot season, & in a cold and moist, in the spring: in much wet you must set them thin-

ter, in great drie, thicket: in what sort you shall make a stroe Garden for Wines Palladius teacheth you. The set requireth a time to rype, & being removed will beare the better fruit. The rades doe beare somt the second yere, & sooner: the Sets, or Branches, scarce in the third or fourth yere, though in some places sooner. Didymus in Constantine teacheth an easie and a readie way of planting the Quicke-set, which is, to take of a strong and ten yere Wine, the longest and fairest branch, that groweth lowest, a sole from the ground, and laying it long in a Trench of a fute depth, to cover it with earth the space of fourt joyns: and if the branch be so long, as it will serue so: two buttyngs, you may make thereof two cootes. You must not suffer roots to come uppon one clay, but allow every root his sup-
porter.

The Branches, or Set that you meane to plant, you must cut from a vrey fruitfull and flourishing Wine, that hath borne ripe & perfec. god fruit, full of joyns, & not any way tainted, but whole & sound. Of such you must choose your Sets, & not of young Wines, that are weakes and scable, but such as are in their chiese state. Moreover, you must gather your Set, not of the highest, nor the lowest, but from the middest of the Wine: the Set must be round, smooth, full of knots and ioyns, & many little burge-
ons. All one as you haue cut it off, take that you set it; for better doth it agree with the ground, and sooner grow. If you are driuen to haue them, buris them in the ground either loose, or llosely bound: and if the time be long that you meane to haue them, you must lay them in empie barrells, strawing earth under them, and upon them, that the earth may lie round about them: and the barrell you must stow closely with clay that there r. set neither wi. de nor aire, so shall you preserue them two moneths in their goodness. Such as are ouer drye, you must lay them in water souce and spicke houses a-
fore you set them, and you must set two Sets together, that though the one faile, the other may take: and if they both grow, you may take the better of them: you must not make a medley of sundry sorte, specially white and black together: but as Columella saith, must sort them severally. You must be-
ware that the Sets haue not put out their sprynge, and that

156 The second Booke entreating

you set not a withered set. Constantine would have the set
 something crooked, affirming that it will the sooner take roote.
 You must lay about them thre or fourt stones, and then raise
 the earth, that it may equally with the dung be troden downe:
 so the stones keepe the earth staine, & as I said before, couleth
 the Roote. Both the ends of the set you must annoint with
 Oxe dung, so the killing of the wormes: as soz the length,
 if it be full of ioynts, it may be the shorther, if it have few ioynts,
 you must make it the longer, and yet not exceeding a fute in
 length, nor a shaftman in shorthenesse, the one soz being
 burnt with oxe dynesse in Sommer: the other, least being
 set too depe, it be with great hardnesse taken up, but this is
 soz the leuell grounde: so upon hills, where the earth still
 salteth, you may haue them a foot and a hand breadth in length,
 Florenius would not haue the trench less than fourte foote in
 depth: so being set shallow, they sooner decay, both soz the
 want of sustenance, and great heat of the Sunne, which is
 thought to pierce fourte hole into the ground: though some
 there bee that thinke thre foote sufficient soz the plant.
 The Trenches for Vines, Virgill would not haue very depe:
 but deeper a great deale soz Trees. Such Vines as you mean
 shall runne upon trees, you must plant thre cubits distant from
 the Tree: afterwardes, when they be well growen, and need to
 be toynd with the Tree (which you shall perceiue by his thick-
 ness) you shall lay it downe in length, and bury it, till it come
 within a foot of the Tree, sufferinge the remaine to goe at liber-
 tie,ipping off all the buds with your nailes, except one or two,
 that it may the better prosper, which when it is growne up, you
 must forme up little & little to the Tree, that it may rest upon
 it: which part of the Tree must be diligently pruned, and the
 spryngs and scions that grow out of the roote, must according
 to Floreninus be cut cleane away. The trees, as much as may
 be, must be forced to the East and West, and both the Tree and
 the Vines, must haue the earth well digges, and manured about
 them. In rich ground, you may suffer the Trees to grow
 in height, but in barren ground they must be pulled at seven
 or eight foote, least all the substance of the Earth be soaked
 up of the Tree. After your planting, you must digge the ground
 every

The length
of the sets.

every moneth, and wiede it, specially from the first of March, till the first of October: every thirtieth day you must digge about the young plants, and plucke up the wades, specially the grasse, which except it be cleane pluckit up and cast away, though it be never so well covered, will spryng againe, and so burne the plants, as they will make them both soule and withered: the oftener you digge them, the more god you doe them. When the Grapes beginnes to alter, you must in hand of digging with your third digging, and when it is ripe, before none & dunging when it wareth hot, and after none when the heate decreaseth you must digge it, and raise the dust, which doing defendeth the Grapes both from the Sunne and the Hille. According to Virgils minde, the Vines must be digged and weeded every moneth: some would have them digged all the Summer long, after every draw: others againe will not have them digged as long as they bud or borgen, for hurting the spryngs, saying, that it is enough to dig them thrice in the yere, from the entring of the Sunne into Aries, till the rising of the seven staires and the Dogge. Some againe would have it done from the vintage before Winter, and from the Ides of Aprill before it take, and then againe before it flowre, and likewise before the burning houres of the day. In some places when they have digged them, they doe not straight wades cover them, but suffer the trenches to lye open all the Winter: in wet & raynire places they cover them somer, closing up the roots with earth, and stopping all the passages of the water. Some make the trenches very deepe, & some not passing a fote depe: and when they have done, they cover them aloft with Mare dung, Shepes dung, or Hogs dung, or of other Cattell: Mare dung is the hottest, & such as causeth the Vines fastest to grow, but maketh the wo^rst ^{What dung is best for Vines.} let Vines. The dung must not be layd clo^e to the Vines, but a little distant from it, whereby the rootes that spread abroad may have some helpe of it, and the dung must not touch the rakes, for breaking of them: if there be no dung at hand, the stalkes of Beans and other Pulse, will well serue the vynes, which both defendeth the Vines from frost and colde, and keper^s them likewise from noysome wormes: the kernels, and the stalkes of the Grapes, doe likewise supplie the want of dung, but

p. 27. the
best dung.

The order
of digging
or stirring
the ground.

Dressing
of Vines.

the best of all, is old stale Urine. The plants of a yere, or two yere old, and so forth, till five yeres, must be discreetly digged, and dunged, according to their state: in sandy ground, the best dung is of Sharpe and Goales: and in such sort you must digge the ground, that the earth that lyeth highest, be cast to the bottome, and that which was at the bottome, be layd a lost: so shall that that was dry, by the moisture within, be helpen, and that which was moist and Risse, by the heate above be solened. You must also see that there be no holes nor pits in the Vineyard, but that it lie even. When you have thus digged it, and that the Vines have taken roote the first yere, the rootes that grow about must be cut away with a sharpe knife: for the Vine, if it be suffered to roote every way, it hindereth the deince growing of the roote. The Vines that are now of two yeres growth, we must digge and trench about two foote deapes, & threescore broad, according to the rule of Socion. Of those Vines that climbe upon Treas, you must likewise cut off the spryngs that runne amongst the rootes of the Treas, lell the small roote tangling with the greater, be strangled: and therefore you must leave some little space betwixt the Vine and the Tre. Often digging can eth great fruitfullnesse: god had must be taken, that the plants be not hurt in the digging: also it must be digged before his flourishing, or shooting out of his leaves: so as immediately therewithall he beginneth to thrust out his frut, so he that diggeth after the comynge forth thereof, loseth much frut with the violent shaking, and therefore must digge the timelier. Cutting and dressyng of the rootes, you must begin in hand with at the Ides of October: so that they may be trimmed and dispatched afore Winter. After Winter digge about the rootes that you have dressed: and before the Sunne enter the Aquinoctium, lebell the rootes that you have trimmed. After the Ides of April, raise up the earth about your Vine: in Sommer let the ground be oftentimes harrowed. After the Ides of October (as I have said) before the colde come in, you must dress the rootes of your Vines, which labour layeth open the Sommer spryngs, which the god husband cutteth away with his knife: so if you suffer them to grow, the rootes that grow deince will perish,

and

of the ordering of Orchards.

and it happeneth that the cotes open all aboue, which must
be suffered both to soile and heat: and therefore the better is
within a foot and a halfe, to be cut off, but so, as you have
not the principall. You must make this cistern of the cotes
at every fall of the leane, for the first five years, till the Wine
be full growen: after, you must dress them every fourth year i
such mines as are yownd with Trees, from the unharidened
muds, cannot be thus haridled. Wines and trees, the sooner their
Rootes be thus yerked, the stronger and heighthier they will be:
but such as grow upon the sides of hills, must be so dressed, as
the upper cotes neare to the Roche may speare largely, and ne-
vertheless towards the foot of the hill the earth must be banke
to keape the water and the mould the better. The old Wine
must not have his cote medled withall so bothering, neyber
plowed, for breaking of them, but the earth a little tilled with
a Spattoche, and when you have thus hast the rootes, Impasse
about it. After this dressing of the cotes, then followeth the
peynning, or cutting, whereby the whole Wine is brought to one
swinge, and that also cut within two inches of the earth: which
cutting must not be in the toppe, but betwixt the ingens, with
one cut, for lossing of leaves without the cut leaveth the
tree that the bud comis out of, betwixt the contrarie, leaveth
his breeding be left the bud. Colombe appoynteth this further
for the cutting of wines, the peynning, vpon the fall of the leane
luyng in cold Countries the cutting in the spring is best,
and in hot Countries vpon the wintering of the leane: the fall of
the leane is the time of the newe creation of the leane, before the buds
and the following appointment of God, yeld up their fruit and
their leafe. Yet must not your lets leaues nearly cut, except they
be very drye: but the old yeres leaues left, will be helpe
with their shadwe, and pulling off the buds smotthly, And
the place where you do your workes, let there be no
stone, because the stones will hurt the leane. Pymphilus in Con-
stançord, wch is in the time of cutting, he sayeth, to begin in
January, & square, from the diffirence of greynesse till the
cotes be yerked (which) shalbe greate when they are
nearely vnew the gathering of the buds, but by dressing
in the spring they looke less fulfille: the buds being rouned
in the fall of the leane, it bringeth the roots in the floures, &

Of Prey- ing.

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and if the cold of frost happen to come, it is speedier. Therefore in cold Countries, it were better to prynge it a little, then to cut it throughly, that is, to suffer the principall sprynge & branches to growe. Againe, it is very necessary to cut them in the Spynge: the cuts must be made with a very sharpe knife, that they may be smoth, & that the water may not stand in them, to the engendryng of iwynnes, corrupting of the wyne: you must cut them round, so will the cut be sooner groen out againe: but Plinie would have them in slope-wise, for the better absoyng of the wa-
ter. The branches that be broad, old, crooked, or iuglythen, cut a-
way, and set yonge and better in their place. You must make an
end of your cutting with as much spidre as you may: from the
Ides of December, till the Ides of January, you must not
touch your Wines with a knife: for Columella witnesseth, that
Wines in winter may not be cut. In cutting rememb're well to
cut the vynet two boynys, for if you cut it in the boynet, you spill
vynet the vynet alwayes downward, so shall it be safte both from
fouure and weathur. You must not cut them very easly, but
when the sun hath drunke up the frost, & the draw, & warmed
the branch the sprynge of the set the first yere, must be cut with
gouernacion, not suffered to groen to rauke, ne cut too neare,
but making the place set to susteyn sprynge, & fine to graen out.
Next unto cutting, follioweth the propynge, & supporting of the
wyne: and it is best the yong & tender wyne not to be stayed
up with any strong styr, but with some small thing of the bell,
and beside it a poule, it must be hantely tyed to the styr with
small stringes of swillid strawe, & sennons, & such as seray this
letter: hantling: iast thought to be bell, for the tyme when ther
were xix or xx pietre, and leyd the riue.

The bell stayes for Wines, are made of xxijillois
Silke, Redd Juniper, Cypresse & Oliver. And in another place he
passefroth the Chelone, this serveth above al the rest. The
bell for the Wine, is the styr, which is layd underneath the vynet.
Gelding of the leaves, & cutting the wyne, is almost in one man-
ner: the gelding of the leves on boathds must be done twise
yearly, so the tree that the superfluous sprynge & leves may be
pluckes off. Which it (as I say to alredy) must be done within
twyn haires after the Ides of Spet, before the wyne begin to folde
for

Propynge
of Vynes.

Gelding
or plucking
off of leaves.

so; about the tenth of June, both the Wine & the Grapes beate, the
 two notable fruits, do decline. Of the second time, the spinners are
 funny; so; some suppose it best to pinche off the leaues & branches
 as faire as it hath left following others, when the fruite is
 full ripe. The superfluous spryngs being young and tender, are to
 be taken away, that the Wine may be more at liberty, & through
 blowen with the wind. This gelding, or cutting away the su-
 perfluous branches and leaves is as needfull as the prapping:
 for both the fruit doth prosper the better, & the prapping the next
 year will be the harmlesse; & the Wine will be the lesser full &
 gallies: for that which is cut being green & tender, both the sooner
 & the soundlier recover himselfe, & the Grape ripeth the better.
 Ten daies before the Wine beginnes to flame, sic that you geld
 it in this sorte: Cut off all the superfluous branches, both on the
 toppe, and on the sides, but meddle not where the clusters grow,
 strike off the tops of the branches for growing too ranke: such
 Grapes as grow towards the South, or the West, leaue them
 their branches to defend them from the heat of the Sun: cut
 away most from the young Wine, for over burdening him.
 After the heat of the Sunne beginneth to fade, away with the
 leaues, for hindring the Grapes of their riping: and while the
 Grape is a flower, busie your selfe with digging about it.
 Such Wines, as with thicknes of their leaves corrupteth their
 fruit, are to be rid of their superfluous branches and leaves a
 sponchly before the gathering of your Grapes, that the boome
 may blow the better through them: but the leaves that
 grow aloft in the very top, must not be meddled with, but left as
 a defence, & shadoe against the heat of the Sun; but if so be, the
 end of summer be given to much raine, and that the Grapes
 swell in greatnessse, then hardly pinche off the leaues from
 the top also.

T H A N. One thing I pray you, let me heare more, the signes
 and tokens of the ripeness: for as I understand, we may not be
 too busie in gathering them too soon, nor vs any linging after
 they be ripe, without great harme.

M A R C H. You say true: for being gathered before they be
 ripe, they will make but small Wine, and not durable. And a-
 gainst, if you suffer them too long, you shall not only hurt the

Wine with the overlong bearing of her burden, but also if boyle or frost happen to come, you put your Wine in great danger. Democritus writeth, that the Grapes endurath in his ripenesse not above five dayes; therefore the iugement of his ripenesse, is not all onely to be given upon the sight, but upon his taste, though Columella thinketh there can be no certaine iudgement given of the taste. But if the stones doe change their colour, and be no longer greene, but be almost blache, it is a signe the Grapes is ripe. Some againe do press the Grapes betwixt their fingers, and if they let the stone to slip out smoth, without any thing cleaving to it, they thinke them meete to be gathered; but if they come out with some part of the Grapes cleaving to them, they count them not to be ripe. Others prove them in this sort: Out of a very thicke cluster they take a Grapes, and as they behold the cluster well, wherein they see no change, they take it for a token of ripenesse. You must gather your Grapes, the Moone being in Cancer, Leo, Libra, Scorpius, Capricorn, or Aquari, and underneath the earth.

Thus much for the Wine in generall, now for particular experiments, as to have it taste more pleasant then the true nature of the Grapes, and to smell in the mouth odourcoullis as it were perfumed, you shall doe it in this manner: Take Darne she Wole water and boyle therin the powder of Cloaves, Chamon, thre graines of Amber, and one of Muske, and when it is come to be somewhat thicke, take a round Gouge and make an hole on the maine Stocke of the Wine, full as deepe as the heart, and then put therin the Medicine, then stopping the hole with Cypresse or Juniper, lay greene waxe thereupon and stinge a lyminelouth about it, and the next Grapes which shall spring out of the Wine will taste as if they were perfumed.

If you will have Grapes without Stones, take your plants who plant the small ends downward. The Wine naturally or him selfe, doth not bring forth fruit till it have beene three yeeres planted: But if evening & morning for the first moneth you will bathe his roote with Goates milke; Cowe milke, it will bear fruit the first year of its planting.

You may if you please, graft one Wine upon another, as the

same

there be upon the bounde; as the **Wine-vine**, **Grape**, or **Capse** upon the **Worrell**, or **Surveare**, the **Rapidity** or **Flame** **Gapse** on
the **Bascoyne**, and the **Solrance** upon one of all another compositions
are the helpe and bring fayre vñntage greatest prosperi-
tante **Gapses**.

If your **Wine** grow too tanke and thicknesse of **Wines**, so that Cures for
the Vine.
the sappe doth knall it selfe in them, and you therby losse the
profit of the fruite, you shal then bere all the costes of thy **Wine**
and calfe away the earth, filling by the white ragges **Wines**
and sand mingled together. But if thy **Wine** be **thinnesse** of it
selfe battaine, then boyle a **Congre**, you shal make one hole
halfe way through the maine booy of the **Gline**, and dylle into
the hole a round pibble stone, whiche although it will stanch in,
yet it may not fill up the hole, but that the **Wine** bosome of the
vñe may passe the roote therer. Then drawe up the hole with
earth and ore being spred together, and onys a bay for it where
water it with old **Wine**, and it will make the **Wine** farrill. If
the **Wine** be troublous with wormes, smale **Ruth**, **Chardge**
of such like, you shall thouring and empyting farrill of ouer
with **Cowes** pisse and **Vinegar** mixt together and it will helpe
it.

T H A R. Is there no way to make the **Gapse** tis spedilie?

M A R I V S. Planie teach th, to rubbe ouer the **Wines** with
farr **Vinegar**, and very old **Wine**, and thus to be often wryght
and covered.

T H R A. What oþer haue you for perfuming of your **Grapes**
when they be gathered?

M A R I V S. Some keepe them hanged up in The **soft** of
chambers, and some in earthen paxs, whose coueres wryghted
beefels.

But if you desir (living in a colde country that is hardly
capable of the **Wine**) to haue **Grapes** in their best and true
huse, most early and longest lasting, you shal in the most
convenient part of your **Garden**, wher is **over** the winter as
mable point therof, build a round house in the fulnesse of a strong
Douceate, but much lower; the ground work wherof shal
be above the ground two or three **Yards** thicknesse, wher this
ground plot you shal place a ground till, and thereon the
strong

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Strong fynes which may reach to the wiste; these fynes shall be placed better then four fynes one from another, with little space between them. Such as you have in Glass windows, two holes may be made in the glass, and soe you may make to what proportion you will; to this pane may serve for a bellotte supporting hand, and you may either couer it with a case, or take a Stake, & tie from the ground to the top between the two holes, and glasse it with very strong Glass made in an ordinary furnace, where small holes may be therewere. This pane shal be strown with sande, and strawe. On the backe side he shal be made betweene certeyn spaces, small holes cleane through into the pane. Sette on the one side oppposite against the pane, and shal draw the Stake of your wine hawing beene sette in the ground, and drawe it toward, which doone, as you drawe it, you shall draine it through those holes, and drawe it away about a malle, so you shall plash upon the Glass windowes as she stande, and soe soon as it will seeme to haue drynesse, you shall be ffer to turne every pane sideways from the stake to the glass, that the refraction of the sunne shal hit the glass, that heate may hasten on the ripening and increase the growth of your Grapes, as also the heate refraint of all manner of euill weather, these Grapes will haue ripe berries as incheare even till Christmas. This experiment hath beene sprooued in England and found most excellent *.

M. H. R. A. I pray you procede with the other fruit Trees of your Orchard.

The Olive.

MAR 1 V 3. Among other fruit trees next unto the Wine (as Columella saith) the chiefe place is givene to the Olive, in Latine Olea. Of all other plants it requireth least trouble and charges, where as the Wine required most: and though it bearre not every yarde, but every other yarde, yet happe to be borne withall, because he asketh neither collour nor labour: and if you bestolde any upon him, he compenseth it thoroughly with the abundance of his fruite. And therer there is great profit and commodity in this Tree, and that the ries of it are so many, and so mischfull, it is good reason to be diligent and carefull about it: he shortly

* 1705. 11

it grows neither too high, nor too low, but rather the first of a hill, fairly as to the small part of Glorie and Asperine; for in such ground the extreme heat of the Sunne, doth nothing moleste with the cold blaste of the winter: for in white trees (as Pline saith) the fayre and the white is of great importance: if beloued to red warren, and white apples, as therefor in Barberry, Sicilie Andalouse, those parts of Italy, especially Campania, it prospere wonderfully: it liketh not too great heat, nor too much cold. And therefore in hot Countries, it lyoveth upon the shoothe side of the hillies, and in colde, upon the South side. It is thought, that the lande about Cyrene, nine miles from the sea, will be either healthie or good, and fruitfull. The best ground is the gravelly ground, setting aloft a little chaffe mingled with sande: or in all yron ground where the lande is gravelly or meadowly high, and more: but the least ground is the heathie ground, and very well agree with the tree. Chaffe-ground is the best ground for, and werry and meadow-ground is good for all. The like will be in barren lande, and barren lande: but you must set chaffe in. Come ground, where either the earthy ground hath yron, or the barren ground, or the heathie ground, or the ground of the white ground, where it is drye, alwaye, and the earthy ground doth the earth: and therewith you set before the white, and the berry comes perfectly and healthily the most white. Like like some affections of the white berries Currant, Blanched, where they be pulleyed, or where the white ground is drye, or the earthy ground, if it cometh so leevly as the white: like like others, because the white ground is good for the white berries, and it is raso, that if you graue the white ground, and will have a fruites that shall be pulleye and pulle. All the culpe-Voiles, and Olive-George. There are many sortes of plantes of the white ground, which may be sowne toward the white ground, among other plante of white ground, and crowdy: they fetch their exerty in the ground: therefere sette the white ground, some white seedling and the toppe, and all the branches, full of blossomes, to the bottom of the white orchard, where the white ground is sowne, and the ground where the white ground is sowne, the white ground is sowne, and the ground where the white ground is sowne,

branches

which the boughs the greatest two or three inches in thickness
are very fætall, which have either cut from the bove of the tree, but
from the reme of all least boughs. Then they cut into pretty
portion of a foote and a halfe in length, taking ymbe heire that
they hast not the same, and paring the ends very smoth with a
sharp knife, and remouing them both ends. Note, that they
may be so longe which may haue two or three, and in setting the lowest
part into the ground in the biebell towards the beaten, they put
them in the ground, and so they grow the faster, and bearre the
better: for if you shoulde set them with the lower end upwarde,
they knowe rather haue comynge, as ymbe unfruitfull; and ther-
fore the better waye of the setting of them. Now must bee
before you set them mumble ouer both the toppe and the foote with
ynges entangled with silke, and so set them deepe in the ground,
distrayning them somme tyme with a wetten mould. You
knowe of whate you will gather all under the ground, or
for fruit, what is in the ground, and therfore will to apparease
above the ground a spade that he lette all inde in the ground,
mete not to haue broken, but such as shall stand with one
spade aboue the ground, where there shal be above the ground, a spade
entangled with silke as the setting of the wates and the
number of ynges with the haire of the head of Dyctimus soft haire.
and therfore to make to plant, you muste plante the ground of ellis-
the place entales and spares a spade for the plant to be made.
and therfore the place entales and spares a spade for the
planting, where the plants are to be planted aboute 10, 12, 14
bushell entales, and therfore you shall haue ymbe 12 bushell
in the bushell either stakcs or rakes, such thines as wil hang
by the haire entales you will haue the bushell togidher. Now
break the haire entales in halfe, or by the root in bushell, and 10,
and 12 bushell, where the haire entales haue beene entaled in
the first, second, and the third pice, the entale shall be entaled both
of them togidher, the first two pices you shall haue entaled with your
ynges entaled with silke, and therfore haue entaled a couple of
bushells. A shalbe entaled 2 bushells entaled before the entale
of the tree. From entaled about the bushell entaled the entale
of the tree, where ther shall be shalbe to be remoued. And therfore to

as big as a mans arme, is best to be removed: let it stand but a little above the ground, so shall it prosper the better. Before you remove it, marke the part that stood beath with a piece of Paper, that you may set it in like maner againe. You must first dig the trenched ground with Hattocks, & after turne in strore, plowed earth, and sow it with Barley: if there be any water standing in them, you must let it out, and cast in a few small Stones, and so setting your hettis, cast in a little dung: After the tenth of June, when the ground gapes with the heate of the Sun, you must take hede that the sunne piecce not through the clefts in the roote. From the entring of the Sun into Libra, you must ridde the rootes of all superfluous sprynge: and if the Tree grow upon the edge of a hill, you must with littell gutters draine away the muddy water. The dung must be cast on at the fall of the leafe, that being mingled in Winter with the mould, it may kepe the rootes of the trees warme. The mother of Oyle must be pouzed upon the great trees, & the mosse must be cut off with an Iron Instrument, or else it will yeld you no fruit. Also as for certaine yeres, you must cut and loppe your Olive trees: for it is an old proverbe, That who so ploweth his Olive Garden, craveth fruit: who dungeth it, nowmeth fruit: who cutteth the trees, forseth fruit. In the Olive Tree you shall sometime haue one branch more gallant then his fellowes, which if you cut not away, you discourage all the rest. The Olive is also grafted in the wilde Olive, specially betwixt the rinde and the wood, and by implastring: others graffe it in the roote, and when it hath taken, they pull by a parcell of the roote withall, and remoue it as they doe other plants. Those Olives that haue the thickest barkes are graffed in the barke. The time of Grafting them, is from the entring of the Sunne into Aries, and with some from the xiiij. of May, till the xiiij. of June. The time of gathering of Olives, is when the greater part oþ halfe the fruit warþ black, and in faire weather: the riper the Olive is, the fatter will be the Oyle. In gathering of Olives, there is most cunning in making Oyle, then in making Wine: the lesser Olives serue for Oyle, the greater for meate. There is sundry sortes of Oyle made of an Olive: the fift of all is raw, & pleasantest in taste: the first stremme that comes from the presse is best, & so in order.

T H R A.

TH R A. Come on then, and let vs heare what you can say of Apple trees: whose use is more commonly knowne unto vs.

M A R I V S. There are such sundry sortes of Apples, differing both in shape and sauour, as are scarcely to be numbered.

We have at this day that are chiefe in price, the Pippen, the Romet, the Pomeroyall, the Marigold, with a great number of others that were too long to speake of.

Apple trees are set either in Februarie, or in March or if the Countrey be hot and dry, in October and November. But all bindes of Apples doe better prosper by grafting, & inoculation, or imbudding, as I said before, about March or April, or what time so ever the say be in the rinde. They are also grafted by implastring, about the tenth of June: though some (as they say) have had good successe in doing it after the entrance of the Sun into Aries, as I haue said before, where I speake of implastring and Grafting. The Apple is commonly Grafted upon the Crab stocke, or upon the Bramble, being first planted, and the yare after cut off within a late of the earth: upon this stocke you may Graft (as I said) the tender young Graftes of any Apples. Palladius saith, you may graft the Apple upon the Perry, the Hawthorne, plumb tree, Quince tree, Peach, Plane tree, Poplar, Willow, and Peare: but in such difference of Countries, we can set downe no certaine order for them all, and therefore as farre as mine owne experiance, and the knowledge that I haue learned of others will stretch, I will gladly shew you. There are that according to the olde order, doe graffe the Apple either upon a wilde Perry, or upon a Quince, wherol they haue a most excellent fruite, called of the olde writers Melimela. If you Graft upon the Plane tree, you shal haue a red scuiteryon may also well Graft your Apple upon the Damson tree, and if you Graft upon the Cydon, you shall haue them beare, as Diophanes saith, fruite almost all the yere long.

But above all to graft the Apple upon the Apple is the best, for the best stocke euer bringeth forth the best fruite *.

The Apple longeth a fat, and a good ground, well watered rather by nature, then by industrie. In mountaine Countries they must always be set toward the South: it prospereth well enough, so it be something holpen with the sunne, neither doe they

they refuse either rough or marshy grounds. A leane and a bar-taine soyle bringeth out worm-eaten, and falling fruit: the noysome wormes are destroyed with Hogges dung, mingled with mans ure, and pouzed upon the rootes. And if the tree be very full of wormes, being scraped downe with a brasen scraper, they never come againe, if the place whence you scraped them be rubbed over with Bullocks dung: some adde vnto vñe Coates dung, and pouze upon the rootes the Læs of old wine. The tree that is sick, or prospereth not, is holpen being watered with ale dung, & water sixe dayes: they must be often watered at the setting of the Sunne, till the Spring be come out. Pliny wryteth, that the water wherein Lupines hath beene sou pouzed upon the tree, doth the fruit good. They say, if the tree be much watered with brins, the fruite will be red. Others againe set under their trees Roles, thinking therby to have their Apples red. Apple trees (as I said before) must be set every sorte by themselves, as Columella biddeth, least the smal trees be hurt of the great, because they be not all of one growth, or strenght. Beside, you must set them very thin, that they may have room to shew out their branches: for if you set them thick, they will never bear well, and thereso, & you must set them forty, or at the least thirty foot a sunder: The Apple declareth his ripenes by the blacknes of his kernels.

For their gathering, you shall understand that the Sommer fruit is first to be gathered, whose ripenes you may partly know by the change of the colour, partly by the pecking of Birds, but cheifly by the kyngell: when they are ripe you shall rather gather them with the hand then beate them downe with poles. There be some that goe up into the Trees, or have a tall ladder with a backe stay, that the ladder may not hurt the tender Branches, and having a Basket with a long line fastened therunto, assoone as it is filled, let it downe to be emptied gently into the greater vessells: & in this gathering you daile not respect the state of the Moone or such like ceremonies. But when you come to gather your winter fruit which are Peppins, Pears, mains, Russettings, the black Annat & such like, you shall in any any wise gather them in the wane of the Moone & in a dry season, & if it be so that your Loxe be so great that you cannot gather all:

Against
hurtfull
wormes,

all in that season, yet you shall get so much of your principall
fruite, the youngest, and fayrest as is possible to be gotten, and
preserue that for the last which you intend either to sell, or to
spend. There be other which gather their Apples into a gath-
ering Apron, and when it is filled, then they emptie it into their
larger vessels; this gathering Apron is a strong peice of Can-
uasic at least an elle every way, which having the upper ende
made fast about the mans necke, & the neather ende with thre
lopes, that is one at each Corner and one in the middest,
through which you shall put a string and binde it about your
waist, insomuch that both the sides of your Apron being open, you
may put your fruite therein with which hand you please; Now
you shall carefully obserue in emptying your fruite from one
vessel to another, that you doe it so gently as may be, least in
polvozing them out too rudely the stalkes of the fruite doe prike
one another, which although it doe appeare little or nothing at
the first, yet it is the first ground and cause of Rotteness, and
therefore you shall to your vttermost powrer gather your Apples
with as small stalkes as may be so they have any at all, which
they must needes have, because that as too big stalks do prike
and bruise the fruite, so to have none at all makes the fruite rot
first in the place where the stalke shoud be: you shall also keape
your Apples cleane from leaues, for they bring graunt and full
of moysture, when by reaon of their lying clost together, they
begin to wither, they strike such an heate into the Apples that
they weldeine and rot instantly.

Offallings. As touching your Fallings whiche are those Apples which
fall from your Trees, either through too much ripenesse or else
through the violence of Winde or Tempells, you shall by no
meanes mixe them with your gathered fruite, so they can by no
means last or inde so long, for the latter whiche falleth by force
of winde, wanting the true nourishment of the earth, & the kind
ly ripening upon the Tree, must necessarily shrinke, wither, &
and come to naught, so that your best course is to spend them
speedily; for the other which hath too much ripenesse, though
it be much better then the other, yet it cannot be long lasting,
both because it is in the falling bruised and also hath too much
and too early ripenesse, which is the first step to rottennesse.

so that they must likewise be spent with all expedition. They are kept in faire lofts, vaults, or cold places with windowes opening towaſt the North, which in faire weaſter must be ſet wide open: & therefore Varro would haue all Apple lofts have their windowes North, that they may receive the North aires: the South winds muſt be ſhot out: The blaſts of the North wind, both make them wrinklē & rugged: they muſt be laid thin upon Straw, Chaffe, or Mats. I had an Apple brought me out of Holland, that endured thre yeareſ: I haue a tree of them here in this Orchard of his colour, called a Greening. You muſt lay every ſort by themſelues, leſt ſunday ſorts lying together, they ſooner rot. Some uſe to lay them in Nut leaues, which both giueth them good colour, & good ſmell. They are alſo kept from rotting, if they be laid in Barley or Wheate. Palladius would haue them kept in earthen vefſels cloſe ſtopped, in Ceteris, or in Caues: Apuleius in Conſtantine, would haue every Apple wrapped in Nut leaues, and ſo layd up: a great ſort of wayes beſide of keeping them, you ſhal reaſt in diuers Anthauies. Some to auoide the hurt of the froſt, uſe to cover them with wet Linen cloth, which being frozen, the fruit that lyeth vnder it, is preſerved. Your Apples muſt be ſo layd up as the ſtaſhes ſtand dothward: neither muſt you touch any, but ſuch as you neede. Apples are hauyfull to bearing taſted, ſo as the fauour caueth them to tyre, as Lucian in his Aſſe wiþneſſeth: the like is written of Peares: the remedy, they ſay, is to let them eate ſome of the fruit above. Of Apples, with certayne Mifs for the purpose, they make a drinke called Cyder, and a ſmall drinke beſide with water, and the reſte of the Apples strained, a god drinke to cole the thickeſt of the poore laboures.

To keepe Apples.

For the making of Cyder it is in this manner; after your fruit is gotten you ſhall take every Apple by it ſelues, and looking upon them, pricke them cleane from all manner of filthynelle, as buſlings, Rottenneſſe, widoſme-eating and ſuch like, neyther leave upon them any ſtaſhes as the blacke Woods which grow on the top of the fruit; which done you ſhall put them into ſome very cleane vefſell, or troughe or (if you haue it) into the Cyder Miff, and either with Battles or the ſpiſe ſtone, crifh or geynde the Apples as ſmall as may bee, and then ſyrrobe them

them as they are bruised into other cleane vessells, till all your fruite be bruised. Then take a bag of hairecloath made at least a yard or three quarters square, and filling it full of the crucht fruite, put it in a presse of wood made for the purpose and presse out all the iuyce and moysture, turning and tolling the bag un-till therobe no more moysture to drop out; and so bagfull after bagfull cease not untill you have prest all, wherein you are especially to obserue that your vessells into which you straine your fruite be exceeding neate, sweete & cleane, & let there be no place of ill sano; or annoyance neare th^e, for the liquour is most apt to take any infec^tiōn; alsoone as your liquor is prest forth & hath stood to settle about five houres or more, you shall then turne it up into sweete hogheads, as those which have had in them last either white wine or Claret, as for the blacke vessell it is tolerable but not excellent, all others refuse; you may also if you please make a small long bag of fine linnen cloth, and filling it full of the powder of Cloves, Mace, Cynamon, Ginger and Ly-mon pills, hang it with a string at the bunghole doyone into the vessell and it will give the Cyder an excellent flavor, and this being done, clay up the Bunghole with clay and salt mixt together so cloise as is possible, then use it at pleasure *.

The Peare.

¹⁰⁴ The Peare, in Latine Pirus, challengeth the next place, and is one of the chiefest beanties of the Dyhard. The Apple tree spreadeth in wood branches: the Peare tree riseth in height, and delighteth in a rich and a moist ground: it doth grow of the Bernell, and of the Pippen, but is a great while before it come to good: and when it is growne, it degenerateth from his alie good nature, and therefore it is better to take the wilde plants, and to set them in their ground in November, and when they bee well rooted, you may graffe upon them. It is said, that it so prospereth with often digging, and much moysture, as it never loseth his flower. You shall doe great good unto it, if every other yere you beflowe some dung upon it. The dung is thought to make great and massie Peares: some putt to a little Ashes to make their taste pleasanter. They are not alonly planted of the roots, but also the very little twigs, being plucked from the root, will grow. If you will set young plants, let them be this

þeres old, or at the least two þières old before you set them. Some againe take the fayrest branches they finde upon the tree, and set them as they doe the Olive. The time of Grafting the Peare, is March and Aprill: Pliny saþt, you may well graffe it when the blossome is on it, which I myselfe haue tryed to be true. It is graffed upon the Quince, the Almond tree, the Pomegranate, the Apple, and the Mulberie tree: if you graffe upon the Mulberie, your Peares shall be redde. Virgill teacheth to graffe it upon an Ashe, where-as indeede it will agree with any stocke: the Grafte must be the growth of a yere, and afore it be graffed, clered of all leates and tender parts. And if you wold haue the fruite pleasant, and the tree fruitefull, you shall boare a hole throught the stocke close by the ground, and driving in an Oken or a Beechen pin, cover it up with earth: if the tree prosper not, wash the rootes, and water them with the lies of olde Waine sixtene daies, so shall it bear the better and pleasanter fruite. It shall never be hurt with wormes, if when ye plant it, you doe annoynct it with the Gauls of an Oxe: if the tree (whose rootes haue biene cut) seeme not to prosper, Palladius his remedy is, to pierce the roote thorow, and to dñe in a pin, made either of Wakte or Plumtree. If your Peares be stony, & choake Peares dig up the earth from the rootes, cleane them of stones, and sift in god new mold againe in the place: let your Peare trees stand thricke stoe alunder, or little leste: your Apple trees farther, as I haue said.

Of Peares is made the drinke called Perrie, which in taste doth resemble Remish wine; and is made in all þeyngs as you make Cyder.

For the gathering of Peares because it is a quainte fruite & much concealeth the rypening, you shall obserue the colour of your Peare from time to time, and if you doe see it alter either in part or all, you shall be sure the fruite is neate rypening, for Peares doe never chaunge their colours but when they doe desir to bee taken from the tree: and of all fruite the Peare may be gathered the hardest, because his owne naturall heate and peculiar qualitie will rypen him best with lyng; yet to bee more strongly softised in the knowledge of the

The gath-
ring.

ripenesse of your fruite, and because it is better to get a day too late then an halfe tyme sooner, you shall before you gather your Peates, whether they be Sommer fruite or Winter fruite, & whether you meane to spend them soone or preserue them long, take one from the Tre, which is neither the rypest nor the greenest, but betwixt both, & cut it through the middel with your knife, not so grawe but mettwart; and then looke into the Coake where the kyndes ly, & if it be hollois, so as the kynellis lie as it were hollow therein; the neather ends thereof being turned either blacke or blackish, albeit the Complection of the Peare be little or not at all altered, the Peates have their full groweth and may very well be gathered.

Now for their keeping (to blanch at all unnescessarie experiments) the best way is to lay them upon a Bed of Ferne, Straw or Chasse one upon another in great thicknesse, and their owne naturall heat will in short space ripen them, which you shall perceiue both by the speedy changing of their colour, and the strength of their smell, which will be exceeding suffocating; which as one as you perceiue, you shall then spread them thinner and thinner untill they be all ripe, and then lay them one by one, in such sorte as they may not touch one another, and then they will last much the longer; You shall also (after they bee ripe,) neither suffer them to have Straw nor Ferne under them, but lay them either upon some smooth Table, some Boards or Fleaks of wands, and they will last the longer.

If you be to carie or transport Peates farre, you shall then gather them so much the sooner, and not suffer any ripe one to be amongst them; and then lyning great wicker Baskets (such as will hould (at least) Quarters a peece) finely within with wheatestraw, fill them up with Peares, and then cover them with Straw, and Cord them above, and you may either Transport them by land or sea whether you please, for they will rypen in their carriage; But when you come to your place of Residencie, then you must needes unpoyk them & spread them thinner, or else they will rot and consume in a sodaine.

Next in order, after Apples & Peares, commeth the Quince. The Quinces
 They are planted after the same manner that Peares and
 Cherries are : some affirme, that the settes that have bieng set
 in Hatch, or in February, haue taken such roote, as they haue
 borne fruit the yere after. They grow well in cold and moist
 Countries, in plaine and hilly groundes. In hot dry Countries,
 you must set them in October. Many set them with the tops and
 the set, but neither of them both is very good: and being set of the
 scorne, they soone degenerate. They are better grafted in the
 stouke then in the barkie, and that in February or March. They
 receive into their stocks, the Graftes (in a manner) of all man-
 ner of trees, the Pomegranate, Ceruissie, all the sorts of Apples,
 and make the fruit the better. The Quince tree must be set in
 that order, that in the shaking of the winds, they drop not one
 upon the other. When it is young or newly planted, it is helpe-
 d with dung, or better with Ashes: they must be watered as often
 as the season is very drye, and digged about continually: in hot
 Countries in October, or November: in cold Countries, in
 Februarie, or March: so: if you doe not often dig about them,
 they will either be barraine, or beare naughtie fruit: they must
 be pryned, cut, and ridde of all encombrances. If the tree be
 sick, or prosper not well, the roote must be watered with the
 mother of Oyle, mingled with the like quantitie of water, as
 Dydimus in Constantine saith, or vnsleckt Lime mingled with
 chalke, or Rozen, and Larte must be powred upon the rootes:
 you shal gather them in a sayre day, being sound and unspotted,
 and very ripe, and in in the wane of the Yrone.

I will now shew you of the Medlar: This tree is also of the
 number of Apple trees, and Peare trees: it is planted in like
 manner as the Quince is: it delighteth in hot places, but well
 watered, though it doe well enough in cold. We haue seen
 it prosper very well among Okes, and Woddes: so: we haue
 seen great Woods of them growing among Okes, that haue
 yielde a great deale of money. Some say it is planted
 of the scorne, in March or November, in a wel dunged ground
 and mellow, so that both the ends be rubbed over with dung. It
 is also set of the stone, but then it is very long before it come to
 any thing: it is excellently well grafted in the Bramble, the
 Pittie,

Pittie, or the Apple. The Medlars that you mean to kepe, must be gathered before they be ripe and being suffered to grow upon the Treæ, they last a great part of the Winter: Next unto the The Serruise Medlar, for neighbourhooð sake, we must speak of the Sennisse, a high treæ with a round berry, fashioned like an Egge. It delighteth in cold places, & if you plant it in hot Countries, it will ware harraine. It hath no prickles as the Medlar hath, at growth of the flome, the lot, the rute, or the science, & prospereth in a cold & wet soyle upon hilles: it is planted in February & March in cold Countries, & hot, in October & Novembre. It is grased either upon his owne stocke, or on the Quince or Hawthorne, either in the Stock or the batke. Next I place the Pomegranate.

This Treæ only as the Fig & the Cline, the body being clouen, dieth not: the branches are full of prickles as the Co:st is: it loveth both a hot ground, & a hot Countrie, and liketh not watry places. In some hot Countries, it groweth wilde in the bushes: it is planted in the Spring time, the rotes being watered with Hoggis dung and stale. It is grased upon his owne stocke, & also upon other trees, & likewise of the sciences that grow from the rotes of the old tree. And though it may be planted sundry waies, yet the best way is the branches of a cubit in length, smoothed with your knife at both the ends, & set slopewise in the ground, with both his endes well sineated with Hoggis dung and stale.

The Cytron under which is comprehended fourre several fruits, as those which are yellow, or golden; the Orange; those which are of a greenish pale yellow, the Willule, those which are long & fashioned like an Egge being yellow, the Cytron and if they be grane, then Limon*: the treæ doth alwaies beare fruit, some ripe, & some sprienging: nature shewing in them a wonderfull fertilitie, as in the trees that Homer descriibeth in the Orchards of Alcinous The leafe is like the Bay leafe, sauing that there grow prickles amongst the: the frut is yellow, wrinkled without, sweet in savour, & sowre in tast: the hecnel(s as of a Peare) a great resister of poisons. The treæ is planted (as Palladius saith) fourre manner of waies, of the hecnel, the Science, the Branch, & the Stocke. If you wil set ykerneil, you must dig the earth two foot every way, and mingle it with Ashes: you must make short beds, that they may be watered with gutters on every syde. In these

these beds you must open the earth with your hands a hand breadth, & set th^e kernels together, with the tops downward, & being covered, water them every day; & when they spring, leave no weeds near them: they will spring the sooner, if you water them with warme water: others say it is best the grains being taken out in the Spring, to set them diligently in good mellowed furrowes, & to water them every fourth or fift day: & when they begin to grow, to remoue them againe in the Spring, to a gentle and to a moist ground, for it delighteth in much wet: if you set the branch, you must not set it above a foot and a halfe in the ground, lest it roote. The science & the stocke, Palladius thinketh it better to be planted, & sheweth which way. If any man mean to cherish this tree, let him defend it wel from the North & set it to ward the South, the sun, in the Winter, in frates & bishetes: wherefore, some that are carefull & diligent in the tending of this tree, do make little vaults toward the South, close covered: and within them, near the wall, they plant the D^reinge, suffering the vaults all summier to lie open to the sun, & to have the heat thereof: and as soone as winter comes, they cover them straight with straw, or mattes, specially with the stalks of goads. This tree delighteth to be continually digged about: they are grafted in hot places in April, in cold Countries in May, not under the bark, but cleaving to the stock hard by the roote: they may be grafted both on the Peare tree, & the Mulbery: but when they are grafted, must be fenced either with a wicker basket, or some earthen vessel. The fruit wil be sweet, if the kernels be steeped in water sod with honey, or which is better, in Shepes milke. Such as you mean to keape, must be gathered in the night, the Spooles being down, and gathered with branches and all, as they hang. Where the fruit burdeneth the tree you must pull them off & leave but few on it, which wil be the pleasanter, & the kindlier fruit. It is at this day nourished both in Germanie & France, & is planted in vessels full of earth, & in hot weather is set abroad in the sunne: in cold weather set in Cellars, or in hot houses. I have seene in Germanie, certaine hot-houses, of purpose made of fiers boordes, that in winter habe warmed all the Garden, and in summer the frames taken away, habe given place to the sun. If while they be young & little they be put into earthen vessels,

bessels, or glasse, they grow according to the proportion thereof: so that you may have them fashioned either like a man or like a beast, according to your fancies: but you must so order your moulds, as the aise may come to them. But lest I kepe you too long with these outlandish trees, I will speak something of our owne trees, wherewith we are better acquainted. Among which we have the Mulberry. This is accounted of all other trees the wisest, because he never blossometh till all cold weather be quite past: so that whensoeuer you see the Mulberry begin to spring, you may be sure that winter is at an end: he is ripe with the first, & buddeth out so hastily, as in one night with a noise he thrusteth out his leaves: they die the hands (as Pliny sayth) with the juice of the ripe berries, & wash it off with the greene berries: he changeth his colour thrise, first white, then red, and lastly blacke: he loueth hot places, and granually, and delights in digging & dunging, but not in watering: his roots must be opened about October, and the leves of Wine poured upon them: it is set of the stones, but thin: it often groweth to be wilde: the best planting is the scence, and the tops, a foot and a halfe long, smooth at both endes, and cubbed over with dung. The place wherein you set your sets, they cover with Ashes mingled with earth, but cover it not above four fingers thick. Palladius bids you to set it in March, and to remove it in October, or November. Ceritius telleth, that the Mulberrie may be planted in the fall of the leafe, by thrusting into the ground the branches, after the order of the Fig tree, which I my selfe have proved, specially, if the end that is cut be well brusied, that it may the quicklier take root: and so when you have made your hole with a stake, thrust it in: it is best grafted on the Beech, and the white Poplar, either by grafting in the stock, or by inoculation: so shal the berries be white. It is grafted also in the Fig, & the Elme, which in old time they would not suffer, for feare of eare uptake. Of the Mulberry is made a very noble medicine for the stomacke, & for the gout: they will longest indure (as it is said) kept in glasses. The leaves do settle to sene Silke-wormes withall, whereof some make a very great gaine, & set them rather for that purpose then for the fruit.

The Cornell tree, is thought never to exceed twelve cubits in height: the body is sound & thick, like bone: the leafe is like an almond

almond lease, but sat'er: the flowre & the fruit is like the Olive, with many berries hanging upon one stalk, first white, & after red: the juice of the ripe berries, is of a bloody colour: it loueth both Mountaines & Wallies, & prospereth both in moist ground and dry: it groweth both of the slip, and of the sieve. You must beware you plant it not neare to your Baes, for the flowre doth kill as many of them as tasteth it.

This next Tre is called Ziziphus, the berries whereof, are like the Cornel berries, the flowre like the Olive flowre, but more sweeter. Columella speaketh of two kindes thereof, the one red, the other white: they are set of the stones, in hot Countries, in Aprill, and in cold places in May, or else in June: you may set both the stone, and the branch: it is very slow in growing: if you set the plant, you must doe it in March in soft ground: but if you set the stone, you must set them in a little trench of a hand breadth, shreke stones together, with their points downeward. It loueth not too rich a ground, but rather a light ground, and a warme place. In Winter (as Palladius saith) it is good to lay stones about the body of the tree. The next are Italian Filberts, the lease is narrow and brawne: soz upon the branches hang the Nuts, like the Nuts of the Pine. Of this tre it is thought there is both male and female, and therefore they grow commonly together, the male having underneath his shell, as it were, long stones: It is grafted about the first of Aprill, but upon his own stocke, and upon the Cerebinth, and the Almond Tre, they are also set (as Palladius witnesseth) in the fal of the lease in October both of the slips, and the Nut. It delighteth in a hot and a moist countrie, and iopes in often watring.

T H R A. Because I remember you tolde me before, that of Plants and Trees, some doe grow of the sed or fruit, and some are Grafted: and because I have heard the Grafting of most of them, I would now saines heare you speake of such Trees as grow onely of the stone, or berry.

M A R I V S. Your remembrance is good: for though they commonly grow better when they be grafted, yet some there be that prosper the better being sownen, and will scarce grow any other way. And though some of the fo'resaid Trees being set, doe in ell prosper, as the Medlar, the Cornel, and divers other, yet sometimes

Ziziphus.

Italian
Filberts.

sometimes they ware wilde, and are long before they come to perfection.

But by Grafting it is restored againe: Some of them again, howsoeuer they be sowne or set, do not degenerate or growe out of kinde, as the Bay, the Date, the Cypresse, the Peach, the Abezicot, the Damson, the Pistace, the Fir Tre, & the Cherrie; and because they be not all of one oder, I will tell you severallly of the chiefeſt of them. To plant Treſes of the ſide, Nature (as I ſayd before) taught men at the firſt: the ſide being devoured of Birds, and with the dung let fall in the clefts of treſes, where they after ſprung and grew.

The Bay.

The Bay, in Latine Lurus, is a moſt gratefull Tre to the houſe, a poſter to Emperours and Bifhops, which chieſely garniſheth the houſe, and ſtandsallwaies at the entrie. Cato maketh two kindeſt thereof, the Delphick and Cypreſſe: the Delphick, equally coloured and greene, with great berries, in colour beſtwinſt greene and red; wherewith the Conquerours at Delphos were wont to be crownd. The Cypreſſe Bay hath a ſhorter leafe, and a darker greene, guttered (as it were) round about the edges, which ſome (as Plinie ſayth) ſuppoſe to be a wilde kind: it groweth alwayes greene, and beareth berries, he ſhorteth out his branches from the ſide, and therefore wareth ſome old and rotten: it doth not very well away with cold ground, being hot of nature: it is planted diuers wayes, the berries being dryed with the North winde, are gathered and layd abroade very thin, leſt they cluſter together, afterward being wet with Raine, they are ſet in furrowes a handfull depe, and very neare together: in March they be alſo planted of the ſlip, and the ſcience. If you ſet them of the ſlip, you muſt ſet them not paſſing nine ſcot a ſunder: but ſo they grow out of kind. Some thiſke, that they may be graffed one in another, as alſo upon Heruſſe and the Aſſe: the berries are to be gathered about the beginning of December, and to be ſet in the beginning of March. Nut treſes are com- monly planted of the Nut, as all other ſhell fruits are. Of all Nuts, the Almond is counted to be the worthiell, they are ſet in February & proſper in a cleere and hot ground, in a ſat & a moyle ground they will grow barren: they chieſely ſet ſuch as are crooked, and the young plants; they are ſet both of the ſlips, the Rote,

Nut trees
The Al-
mond tree

Noot, and the Vernell. The Nuts that you intend to set, must be laide a day before in soft dung: others steepe them in water, soz with honey, letting them lye therein but onely one night, least the Sharpnesse of the honey speyle the Plant: and being thus ordered, Columella sayth, they will be both the pleasanter, and grow the better. The tops and the sharpe ends you must set downward: soz from thence commeth the roote, the edge must stand toward the North: you must set three of them in a Triangle, a handfull one from the other: they must be watered every ten dayes, till they grow to be great. It is also planted with the branches, taken from the midst of the tree. The Almondis grafted not neare to the top of the stocke, but about the midst, upon the bowes that grow out. This tree doth sowne heate fruit, and flowereth before all others, in January or February. Virgill accounts it for a Prognosticatour of the plentifullnesse of Coane.

When thicke the Nut Tree floweres amidde the wood,
That all the branches laden bend withall:
And that they prosper well and come to good,
That yeere be sure, of Corne shall plenty fall.

The bitter ones (which are the wholesomer) are made sweet, if rouned about the Tre, souce fingers from the roote, you make a little trench, by which he shall sweat out his bitternes: or else if you open the rootes, and poure thereon either Urine, or Hogs dung: or if at the roote of the Tre, you thrust in a fat wedge of Pitch Tre. By this meanes (as Basilius sayth) they will lose their bitternes: but no Tre groweth sooner out of kinde, and therfore you must often remoove it, or graffe when it is great.

Walnuts, they are set in the ground (as Plinie sayth) the Walnuts, frame downward, about the beginning of March: some think, that they will grow as the Filbert doth, either of the slip, or the rate: it groweth speedily, and liketh a dry and cold place better then a hot. The Nut that you meane to set, will grow the better, if you suffer it to lye souce or ffeue dayes before in the wafer of a boy, and will prosper the more, if it be often remoued: those Nuts (as it is thought) prosper best, that are let fall by Crows, and other birds. If you pierce the Tre through with an

an Augur, and fill up the place againe with a pin of Clme, the
trees shall lose his knottie hartnelle, neither will he lose his
fruit, if you hang by either Pallet, or a piece of Sharlet from a
Dunghill: his shadow is great, and vnwholesome. Hee sucketh
out a great deale of god iuyce from the ground: so as you
see, they are very mightie and high Trees, so as some of
them are two or thre fadomis about: they occupie a great
deale of roome with their standing, and beguile the other
Trees of their sustenance: Besides, there are certayne trees
they agree not well withall, and theresoore have I set them
on the outside of my Orchard, as standards to defend their
fellowes from tempest and weather.

Hassel nuts. Among Nuts, is also to be recounted the Hassell Nuts,
Filberts. a kinde whereof is the Filbert, they are planted after the man-
ner of the Almond: it delighteth in clay and watry grounds,
and upon Hills, being well able to abide the cold,

Chestnuts. Among the Nutes also chalengeth the Chestnut his place,
though he be rather to be reckoned among Naste, whereby
he is called the Nut or Naste of Jupiter, it loveth to grow on
Mountaines, and in colde Countries: it hateth waters, and
desireth a cleane, and good mould: it misliketh not a moyst
grauell ground, and loyeth in a shadowie and notherly banck,
it hateth a stiffe and a red clay ground: it is planted both of the
Nut, & is set: it is better planting Woods of them, of the Nut,
then of the set, otherwise the safer way were the set, which in
two yeres beareth fruit. It is planted when the Sunne is in the
Equinoctiall, both of the sciente, the set, the branch, and the root,
as the Olive is. The Chestnuts that you meane to sowe, must
be very faire and ripe, the newer they be the better they grow.
You must not set them after that soote that you set Almonds,
or Filberts, but with the sharpe ende upward, and a fowt a sun-
der: the furrow must be a shaftman depe. You were better (as
I sayd) to make your Groue of the Nut, then of the sets,
which will be mete to be sellid for stayes in seuen yere.
Columella wrichteth, that the Chestnut, mett for the supporting of
Wines, if hee be sowned in well digged ground, both quickly
spring, and being felled after five yeres, it prospereth like the
Willow: and being cut out in stayes, it lasteth till the next
selling,

elling, as shall be shewed hereafter, when we speak of Woods. They will also have the Chestnut to be grafted on the Walnut, the Beech, and the Oak: if ha'vē bane scene, that where they grow two and two together, they prosper the better.

The Pine is planted not much unlike to the Almond, the ^{tree.} Nernels of the heite-clockes being set as the Almond is: they are gathered in July, before the Canicular windes, and ere the Nuts, the huske being broken, fall cut. The best time of sowing them, Palladius reckoneth to be October, and November: this Tree is thought to be a curioser of all that is sown under it. The Cherry tree is easie to be planted, if the stones be but cast abroad, they will grow with great increasē: such is their so^{ys} ^{tree.} wardnesse in growing, that the staves or supporters of Tines, being made of Cherry trees, are commonly seen to grow to be Trees. They are grafted upon the Plumme Tree, upon his owne Stocke, upon the Plane Tree, & on the Bramble, but best upon the wilde Cherry, it iogeth in being grafted, and beareth better fruite: if you graffe them upon the Pine, your Tree shall bear in the Spring: the time of grafting, is either when there is no Gumme upon them, or when the Gumme hath left running. They remove the wilde plant, either in October or November, that the first of January or February, when it hath taken roote, it may be graffed upon. Martiall would haue your graffe it in the Stocke: but indeed it prospereth better, being graffed betwixt the bark and the wood. It delighteth to be set in deepe trenches, to have roome enough, and to be often digged about. It longeth to have the withered bow continually cut away: it groweth best in colde places, and so hateth dung as if it be layd about them, they grow to be wilde: it is also planted of the slips, and will beare his fruit without stones: if in the setting of the set you turne the upper end downward. Others will that the tree being young & two foot high, be slit downe to the roote, and the pith taken out of both sides, and joyned together, the seames close bound about, and covered with dung: which within a yere after, when it is well growen, the young graffes (which hitherto haue boorne no fruite) if you graffe them, will beare Cherries without stones. There are sundry kinds of Cherries. Some redder then the rest; some coleblacke; some betwixt black and red, some greene; then the



the Bay-cherry grafted on the Bay, the small Cherrie, and the wilde Cherrie".

The Plome tree. The Plome tree is planted from the middle of Winter, till the Ides of February, but if you set the stones at the fall of the leafe, let it be done in November, in a god and mellow ground two handfuls deepe: they may be likewise set in February, but then they must be steeped in ly thre dayes, that they may sooner spring: they are also planted of the young sets that grow from the body of the tree, either in January, or in the beginning of February, the rootes being wel covered with dung: they prosper best in a tich and a moist ground, and in a colde Country: they are grafted toward the end of March, and better in the clouen stocke, then in the backe, or else in January, before the Gum begin to drop out: it is Grafted upon his owne stocke, the Peach and the Almond. There are sundry sortes of plomes, whereof the Damson is the principal, joyning in a dry ground, in a hot coun-
try, and is grafted as the other plomes are. There are divers coloured Plomes, white, black, purple, and red: divers sortes of plumbes, as the Emperiall, the Damasine, the Verdocio, the Peare plumbe of all sortes, the pryme Plumbe, the Pescop-
plume, the wheate Plumbe, the Bay plumbe, the Horseplumbe, the Fingar plumbe, and many others".

17 The Peach tree. Of the Peach tree, there are sone kindes: but the chiefeſt are the Duracins, and the Apricots: in November in hot Countries, and in others in January, the stones are to be ſet two ſoote al-ſunder in well drefled ground, that when the young trees are ſprung up, they may be remoued: but in the ſetting you muſt ſet the ſharpe end downeward, and let them ſtand two or thre fingers in the ground: wheretherer they grow, they reioice moſt in watry grounds, which ground if you want, loke that you wa-ter them abundantly, ſo ſhall you haue great ſtore of fruit. Some would haue them ſet in hot countries, and sandy ground: whereby they ſay, their fruit will longer endure: the better will alſo the fruit be, if as ſone as you haue eaten them, you ſet the ſtone, with ſome part of the fruit cleaning to it: it is grafted either on himſelfe, the Almond, or the plometree. The Apple of Armenia, or Apricot, doth far excell the Peach, uſed as a great dainty among Noblemen, and much deſired of the ſick: they are beſt grafted

grafted in the Plome, as the Peach in the Almond tree: the fairest graftes that grow next the body of the tree are to be chosen and grafted in January or Februarie, in cold countries, and in November in hot: for if you take those that grow in the top, they will either not grow, or if they grow, not long endure. You shall inoculate, or imbud them in Apill or May, the stocke being cut aloft, & many yong budset in: neither must you suffer them to stand very farr one from the other, that they may the better defend themselves from the heat of the sun. The French men, and our Gardners also, after the Italians order, do graffe the Abrocot, taking a graft (not full a finger long) or the bud that is well shot out, with a little of the rind cut off, and sittting the rind of a young Plome tree crossewise they set them in, binding them well about with Hempe, or Toole, & that in the ende of June, or in July, and August. Some thinke they will be red, if they be either grafted in the Plane tree, or haue Roses set underneath them: they wil also be figured, or written in, if sevendayes after that you haue set the stome, when it beginneth to open, you take out the Rime, and with Vermilion, or any other colour you may counterfeite what you wil, if after the stome closed up about it, & covered with Clay, or Dogs dung, you set it in the ground. Again, you shall haue them without stomes, if you pierce the Tree thorow, and fill it up with a pin of Willow, or Cornel tree, the pith being had out: the Rates of the tree must be cut & dressed in the fall of the leafe, & bounded with his owne leaves: you shall also at this time prynge them, and ridde them of all rotten and dead bowes. If the Tree prosper not, poure upon the rates the Lees of old Wine mingled with water. Against the heate of the Sunne, heape up the earth about them, water it in the evening, and shadow them as well as you may. Against the frosts, lay on dung enough, or the Lees of Wine medled with water, or water whereon Beanes haue bene sodden: if it be hurt with wormes, or such baggage, poure on it the Wine of Wren medled with a third part of Vinegar.

There is also grafted upon the Abrocot another Plumbē more excellent then it selfe, which is called the Nectarine, being lessē then the Abrocot, but far excelling in taste, yet in all other natu-
ral qualitites it differeth nothing from the Abrocot. Now
to

to preserue either this, the Abxicot, or any kinds of curiositie
 lanuish stone fruit, and to make them beare plentifully, be the
 Spiring or begining of Sommer never so bitter, you shall after
 you have planted your Abxicot or other fruite in the face of the
 Sun rising, & plash him up and spread him against the wals of
 your Garden or house; upon the top of the walle and above the
 tops of the trees all along the wall, build a large pent-house of at
 least sixe or seuen scote in depth, which ouer shadowing the trees,
 will (as experiance hath found out) so deffend them that they
 will ever beare in as plentifull maner as they have done any
 particular yere before. There be many that will scoffe, or at
 leaste give no credit to this experiment, because it carrieth with
 it no more Curiositie, but I can assure you there is nothing
 more certaine, so I have seene in one of the greatest noble-
 mens Gardens in this kingdome, where such a Penthouse was
 made, that so farre as the Penthouse went, so farre the Trees
 did prosper with all fruitfulness, and where the Penthouse end-
 ed, not one Tree bare; the Spiring being most bitter & unsea-
 sonable. Now I haue seene others (whose pursses may buy
 their pleasures) which haue in those Penthouses fixed divers
 strong hooks of Iron, and then made a Canuae of the best Po-
 ledarie with strong looppes of small cord, which being hung
 upon the Iron hooks, haue reached from the Penthouse to the
 ground, and so laced with Cordes and small pullics, that like the
 Dayle of a Ship it might be trussed up and let downe at plea-
 sure. This Canuae thus prepared, is all the Spiring & latter
 end of Winter, to be let downe at the setting of the Sunne, and
 to be drawne up at the rising of the Sunne, and both reason and
 experiance findeth it to be most profitable *.

The Date
tree.

The Date tree groweth in a mild grately ground, and de-
 delighteth in a watry soyle: and though it desires to have water
 all the yere long, yet in a dry yere it beares the better: there-
 fore some thinke that dung is hurtfull unto it.

Now for the gathering and preseruing of all manner of stone
 fruite, you shall with such a ladder as I formerly spoke of for
 the Apple, gather such fruite as you finde ripe by their colour,
 not taking the fruite from the stalle, but nipping the stalle and
 the fruite from the Tree, and you shall handle the fruite as little

as you can; If any of the fruite hang out of your reach, then you shall have a fine gathering hooke and with it draw the banches gentlie unto you, and disburthen them into a round Basket made with a syue bottome, having an handle twarte the toppe, to which a small hooke being fastned, you shall with that hooke hang the Basket, by you on some convenient Bough, and as you fill this Basket so you shall discharge it into greater Baskets made also with syue bottomes, & under them crose Lathes or splinters at least thre fingers broad to defend the bottome from breaking; but if you be to carry your fruite far, as from County to County, or Market to Market, then you shall packe them into Hampers or Panniers made with false bottomes like syues, and lynes on each side and the top with graine ferme. Thus much for the generall gathering of the ordinarie Stone-fruite; Now for the gathering of the Nectarine, the Apricot, the Peach of all kindes, the Dateplumbe and indeede any curios grafted Plumbe, you shall duly consider when they are perfectly ripe, which you shall not Judge by their dropping from the Tree, which is a signe of over much typonesse, tending to rotteness, but by the true mixture of their colour and perfect change from their first Complection; for when you shall perceiue, that there is no Greynesse nor hardnesse in their out-sides, no not so much as at the setting on of the stalks, you may then Judge that they are ready to be gathered, and for a perfect triall thereof you may (if you please) take one which you thinke ripest from the Tree and opening it, if you see the stone comes cleane and dry away, and not any of the iugart of the fruite cleaving unto it, then you may assure your selfe that the fruite is ready to be gathered, which you shall with great diligence and care gather not by any means laying one Plumbe upon another, but each severally by another, so these tender plumbes are naturally so apt to receive hurt, that the least touch (though of themselves) both bruise them and occasion rotteness. Now when you have gathered them, if either you haue desire to send them any towney, as ingratulation to your friends or for other private Commodity, you shall take some classe, smooth Wore, answerable to the sorte of fruite you are to spend; and first lyne it

within all over with white paper, then lay you plumbs one by one all ouer the bottome of the Bore, then coveringe them all ouer with white paper, lay as many more upon the top of them, and cover them likewise with paper, & so lay Row upon Row, with papers between them, until the Bore be sufficiently filled, & then clossing it up, send it whither you please, & they will take the least hurt, whereas if you shoulde line the Bore either with hay or straw, the very Skyns are so tender that the straw would print into them & bruise them exceedingly; and to lay any other soft thing about them, as Wooll, Bumbast, Chaffe, Bran or the like, is worse of all, so they heate the fruite & make them sweat, through which they both lose their colour & rot speedily.

Of hard
Plumbe
and hastie
rypening.

As touching the gathering of plumbes when they are harde and so rypen them afterward, by laying them upon Nettells, to which consenteth the most of the London Scutlers, yet I am utterly against the Opinion, because I both know nature to be the perfect worke-mistris, & where she is abridged of her power there euer to follow disorders & imperfections, as also that when such things are done, as it were through an ouer hastie constraint, there cannot pracie any thing but abstiuenes and a diffidfull cellish; from whence I thinke it comes to passe that in London a man shal very selowne tast a delicate or wel relish plumbbe, unless it be from such as having fruite of their owne, makes no commoditie therof above then their one pleasures; yet thus much I would perswade evertie one, that if they haue many ripe fruite then they can use or spend them, that then after they are gathered to spread them thinly upon nettels or vinecke boches, and it will preserue them sound and well coloured. But if your store be so superabundant that in no reasonable time you can spend them, then what you do not preserue or make Goodi, make or Marmalade of, the rest you shall take, and sprinkling them over with swet wort, lay them out by one (yet so as they may not touch one another) upon Peaces or Fleakes made of wands, and put them into an Ouen after Meane or Peaces haue bene bakynge out, and so leasely wyse them, and they will not onely last but taste pleasantly all the yere after: and in this sort you may use all kinde of plumbeys or Peaces whatsoeuer: but I kepe you too long in the describing of my Dietrich.

T M R A.

• T H R A D no, I rather (whilst I heare you) imagine my selfe to be amongst them, planting and vicing of their fruits; but now remaineth that in stead of a conclusion to your talkes, you declare the order of preserving them, so that end specially, that those things that are appointed for remedy (being not lucly, or in time administered, be not rather a hurt) then a helpe.

M A R I V S. Your motion is good: First therefore, and generally, dunging and watering is needful for fruit Trees, a very few excepted: and herein heed must be taken, that you doe it not in the heate of the sunne, & that it be neither too new, nor too old: neither must it be laide clo's to the stote of the Tree, but a little distance off, that the fatnesse of the dung may be drunke in of the roote. Pigeons dung, and Hogges dung, doe also heale the harts o' wounds of Trees. The water wherewith we water them, must not be fountaine water, or well water, if other may be had, but drawne from some muddie Lake, or standing Woole. Moreover, you must take heed as I also told you before (when we began to talke of planting of an Orchard) that your Trees stand a good distance a funder, that when they are grovone up, they may haue roome enough to spread, & that the small and tender be not hurt of the greater, neither by shadow, nor by apping. Some would haue Pomegranate Trees, and Myrtels, and Boxes, set as thicke together as may be, not passing nine foot a funder: and likewise Cherry trees, Plumbe trees, Quinces, Apple trees, & Peare trees, shalfe foote and more a funder: every foote must stand by themselves, that (as I said) the weaker be not hurt of the greater. The nature of the Woole, is herein most to be regarded: for the Hill requireth to haue them stand neare together, in windy places you must set them the thicker. The Olive (as Cato saith) would haue fife & twenty foote distance at the least. You must set your plants in such sort as the tops be not hurt, o' bruised, nor the bark, nor rinde flaued off, so the bark being taken away round about, killeth any kinde of Tree. You Shadow
of Trees, must also haue a regard of the shadow, what trees helpe, and what trees it hurteth. The Walnut tree, the Pine tree, the Pytch tree, and the Firre tree, whatsoeuer they shadow, they poison. The shadow of the Walnut tree, and the Oak is hurtfull to Coynes: the Walnut tree with his shadow also, is hurtfull to

190 The second Booke entreating

mens heads, & to all things that is planted neare it. The Pine tree with his shadow likewise destroyeth young plants, but they both resist the wind, & therefore god to enclose Vineyards. The Cypresse, his shadow is very smal, and spreadeth not farre. The Shadow of the Gigge tree is gentle, though it spread farre, & therfore it may safely enough grow amongst Vines. The Elme tree, his shadow is also mild, nourishing whatsoever it covereth. The Piane tree though it be thicks and grosse, is pleasant. The Poplart hath none, by the reason of the wavering of his leaves. The Alder tree hath a thicke shadow, but nourishing to his neighbours. The Vines is sufficient for himselfe, & the moving of his leafe, and often shaking, tempereth the heate of the sun, and in great raine well covereth it self. The shadow of all those is commonly milde and gentle that have long stalkes: the dropping of all trees is naught, but worst of all those, whose branches grow so as the water cannot readily passe through: so the drops of the Pine, the Wake, and the Hassholme, are most hurtfull, in whose company you may also take the Walnut: the Cypresse (as Pliny saith) hurteth not. So: sober, pryning and cutting, is very good & necessary for trees, whereby the dead & withered boughes are cut away, and the unprofitable branches taken off: but to pryn them every yere is naught, though the Vine requireth cutting every yere: & every other yere, the Spynstille, the Pomegranate, and the Olive, whereby they will the sooner bear fruit: the others must bee the seldomer pryned. Olive trees must be pryned in the fall of the leafe, after the setting of the seven stars: and first, they must be well dunged, as a helpe against their hurts. You must cut away all the old rotten branches that grow in the middest, and such as grow thicke, and are tangled together, and all the water boughes, and unprofitable branches about them: the olde ones are to bee cut close to the stocke, from whence the newsprings will arise. Scarifying also or lancing, is very wholesome for the trees, when they are scrauned with their leaves, & drinessse of their barkes: at which time we use to lance the barkie with a sharpe knife, cutting it straight downe in many places: which, what god it doth, appeareth by the opening and gaping of the rinde, which is straightwaies filled up with the body underneath. You must also trimme

Dropping
of Trees.

Pronyng.

Scarifying.

and

and dress the rotes of your Trees after this sort: You must open the ground round about them, that they may be comforted with the warmth of the Sunne, and the raine, cutting away all the rotes that runne upward. The trees that you remoue, must be marked which way they stood at the first.

Also you must consider well the nature of the soyle, that you remoue out of a drye ground, into a moist, and from a barraigne hill, to a moist plaine, and rather satte, then otherwise. The young plants being thus remoued, must in the second or third yere be pryned, leaving still about thre or four branches untouched so shall they the better grow: these must you usually doe every other yere.

The old tree I see remoue with the toppes cut off, & the rotes unperished, which must be helped with often dunging and watering. Apple-trees that blossome and beare no fruit, or if it beare, they sodainly fall away, you shall remedie by slitting of the roote, and thrusting in of a stone, or a wooden wedge. Also if you water your Trees with Wine that is olde, it greatly availeth (as they say) both for the fruitfulnesse, & pleasantnesse of the fruit. If the Tree decay by reason of the great heat of the Sunne, you must raise the earth about it, and water the rotes every night, setting up some defence against the Sunne. To cause their fruit to be quickly ripe, you must wet the little rotes with Vinegar, and Wines that is olde, cover ring them againe with earth, and oft digging about them. The Wine of men, if it be kept three or four moneths, doth wonderfull much good to plants, which if you use about Wines, or Apple-trees, it doth not onely bring great increase, but also gineth an excellent taste and favour, both to the fruit and the wine: you may also use the mother of oyle, such as is without salt, to the same purpose, which both must speedily be used in Winter.

Against frosts and milts, you must lay up round about your Orchard, little Faggots made of stalkes, rotten boynes, or straw, which when then the frosts, or milts arise, may be kindled, the smoake whereof auoydeth the danger. You must have also drye dung amongst your Wines, which when the frost is great, you may set a fire: the smoake whereof dispeteth the frost.

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¶ Then the tree hath any sicknesse, they use to pouze upon the rootes the Lees of Wine mingled with water, & to sow Lupines round about them. The water also wherein Lupines have beene sowne, pouzed round about, is very good (as Plinius saith) for Appletrees. But perhaps I trouble you with this tedious, or long discourse of Herbs, Plants, & Trees, and therefore though there be much more to be spoken of, least I should seeme to ouerwearetie you, I will make an end of the Discorde and onely speake a word or two of other Woods; Now *

¶ Of Woods. As touching Woods, Ancus Martius (as Petrus Crinitus witnesseth) was the first in Rome that euer dealt in them: the old Father had alwaies a speciall regard of Woods, wherefore Virgil saith:

If that of Woods I frame my Song,
Woods unto Princes doe belong:
If that of Woods I list to sing,
Woods may full well beseeme a King.

It was ordained by the Romanes, that the Consuls should have the charge of the Woods, that there should no Timber be wanting for building of Houses, and Ships, & other Lymber, wodis, both publique, & private. The State of Venice at this day, obserueth the same order, appointing a private Officer for their Woods, who hath in charge as well to see to the yarely planting of them, as to let that there be wanting no Lymber, for their necessarie uses. The Wood that you see is of Oaks, Beeches, & other Haste trees: some part seruing for Lymber, and other for seluel. Of these therefore will I first begin to speake, & then of Olive Gobes, and Willowes.

¶ Planting of woods. How so? the generall planting of Woods it was a custome amongst the Ancient, that when they found any hard & barraine earth such as was unapt for Grass, or at least such as bare but grasse that wold keepe life not constell life, they presently plotted it up & sowned thereon Akeorns, Ashkeynes, Maple knots, Birch-apples, Hawes, Holwes, Quets, Fulleys & all other seeds of trees in unnumberable quantity: then this there is no better, no more easie nor more safet way of plantation, alwaies provided the soyle lie dry, no matter how mountanous, or low Marshes, dallyes and such as are subiect to Inundations seldome, noutish wood well: after

after your seede is layd safe in the earth, then be sure to fence it safely about either with hedge, ditch, pale or the like which may keepe out all manner of fowlestoked Beasts, soz comming within the same soz at least the space of ten yeres, after which time it will dessend it selfe; that which is Brouised or bitten before, will never prosper or spring to any godnes. Now as the Sandie & Gravell earth (which is usually the most Baraine) will beare noode, so will also the clay ground, and it is found by experiance that one Dake growing upon the clay ground, is worth any five which grow upon the sand, for it is more hard, more tough & of much longer indurance, not so apt to teare, rybe or consume either with Lyne, Rubbish or any Casual moisture; whence it comes that ever your Shipwrights, or Millwrights deale the Clay Dake for their use, and the Joyner the Sand-Daks for smoothes and Claynscot. Now*

Among the Maste Trees, and such as serue for Timber, The Oake, the first place of right belongeth to the Dake: he that will then plant an Dake Grove, must provide him of the ripe Acoynes, not ouer-dried, nor faultie, or any way corrupted: these must he sow in good ground well filled, with as great carefulnesse as he plants his Orchard, and well enclose it, that there come no Cattell in it: which (when they be something growne) you must about Februarie remove to the place where you entende to plant your Towne: if you cut and proyne them, it is thought they will prosper the better for Maste: but if you reserue them for Timber, you must not touch the tops, that it may tunne up the straighter and higher. In removing them, you must make your trenches a foote and a halfe deype, covering the Rootes wel with heath, taking good heed you neither bryuse them, nor breake them: for better you were to cut them: The Dake arrieth well enough with all manner of ground, it groweth almost in all grounds, yea euen in gravell and sand, it liketh nowt a fat ground, neither resuseth it the mountaine. We have at this day an Dake in Westphalia, not farre from the Castle of Alkenan, which is from the foote to the nearest bole, one hundred and thirty foote, and thre elles in thicknesse: and another in another place, that being cut out, made a hundred Tain-loade: not farre from this place there grew another Dake of

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ten yards in thicknesse, but not very high : the Nubers in Germany, were wont to use so; their Ships hollowed Trees, wherof some one (as Pliny saith) would carrie thirtie men. The next amongst the Haste trees is Beech, planted almost after the same manner that the Oaks be. The Haste holme it groweth high, if it have a ground mete so; it: it prospereth upon hilles, & likes not the plaineit beareth Acornes lesser then the Acornes of the Oak, a leafe like a Bay, and is continually grane. The like hath the Co:ke-tree, which is counted amongst those that beare Haste, the barke whereof we occupie for the stoles of our fynning Nets, & Pantofels for winter: all other trees (saueing onely the Cork) if you spoyle them of their barke do dye. Another Haste bearing Oke there is, called in Latin Quercus silvestrum, a kinde wheredof some thinke the Cerre tree to be, called in Latine Cerrus, grooving in wilde and batten places. There are some that doe number the Chestnut tree amongst the Haste beaters: but of this I have spoken before. The best Haste is the Oke Haste, the next the Beech and the Chestnut, then the wilde Oke, &c. All very good and mett soz the fatting of Cattell, specially hogges. The Oke Haste, or Acorne, maketh thicke Bacon, sound flesh and long lasting, if it be well salted & dried; on the other side, Chestnuts and Beech Haste: make sweet and delicate flesh, light of digestion, but not so long lasting. The next is the Cerre Tree, that maketh very sound and good flesh: The Haste holme maketh pleasant Bacon, faire and weightie. Pliny saith, that it was ordained by the Law of the twelne Tables, that it shold be lawfull for any man to gather his owne Haste, falling upon the ground of his neighbour, which the Quicke of the chiefe Justice hath thus interpreteth: that it shall be lawfull for him to doe it thare bayes together, with this proviso, that he shall onely gather the Acornes, and doe no harme to his neighbour, as Vipianus witnesseth. And thus of such Trees as beare Haste. Now will I joyne withall the principallest of the other Trees, to make up your Medecines, amongst which are the Elm, and the Walllow: the Elm, in the planting whereof, because it is to great use, and easly grooves, we may not let passe: first, because it groweth well with the Wine, & ministereth good food to Cattle: secondly (as it is all heart)

Beech
wood.

Haste.

The Elm,

heart) it maketh good timber. Theophrastus and Plinie, doe both affirme the Elme to be barren, peraduenture because the seede at first, comming of the leafe, fowmeth to lye hid among the leaves, and therefore it is thought to be some of the leafe (as Colomella affirmeth.) He that will plant a Grove of Elmes, must gather the seed called Samara, about the beginning of March, when it beginneth to ware yellow, and after that it hath dyed in the shaddow two daies, sow it very thicke, and cast fine sifted mould upon it, and if there come not good store of rains, water it well: after a yere you may remove it to your Elme Grove, setting them certaine fote a funder, & to the end that they rase not too depe, but may be taken up againe, there must be betwixt them certaine little trenches, a fote and a halfe distance: and on the roote you must knit a knot, or if they be very long, twist them like a Garland, and being well mointred with Bullockes dung, set them, and tread in the earth round about them. The female Elmes are better to be planted in Autumn, because they have no seede: at this day in many places, cutting off Sets from the fairest Elmes, they set them in trenches, from whence when they are a little growne, they gather like Sets, and by this dealing make a great gaine of them. This Timber of all others is excellent for water works, for lying buried in the earth, for Arelltries, Wolves, planks and other uses*. In the like sort are planted Groves of Ashes. The Ash delighteth in rich and moist ground, and in plaine Countries, though it grow well enough also in dry grounds, he sprawleth out his rootes very far, and therfore is not to be set about cornie ground, it may be seld every third or fourth yere, for to make staves for Wines. The Ash groweth very fast, and such as are sojourners are set in February, with such young plants as come of them, in good handsome syder standing a row: others set such Ashes as they meane shall make supporters for Garden Elmes, in trenches of a yere old, about the Calends of March: and before the thirty fift moneth they touch them not with any hande, for the præ-fering of the branches: after every other yere it is pruned, and in the sixt yere lopped with the Wine: if you are to cut away the branches, they will grow to a very goodly height, with a sound boord, smooth, plaine, and strong: Plinie setteth of

experience, that the Serpent doth so abhorre the Ashe, that if you enclose him with the branches, he will rather run into the fire then goe through the boves. When you intend to plant Ashes for a spedie profit, you shall not according to the olde custome chuse the smooth, small, long plants, which hardly are thre inches in compasse, and have put out hardly any branches, and are such as grow from the rootes of Old Ashes cut downe before, which our auncient Woodwards have used to slip or cleave from those Rootes; no, these are the worst sort of Plants: But you shall take the true ground Ashe which springeth from his own proper Root, being smooth even sound and staight, without bwise, Canker or other impediment; This you shall digge up by the Root; being twentie inches in compasse, and having clesed the Root you shall leave each spray not above haile a fote or eight inches in length; but for the small thyddz or Lassells of the Root, those you shall cut cleane away close by the wood, and so plant it in every poynct as was shewed you for the planting of the Elme, onely the toppe thereof you shall by no meanes cut off, becausse it is a Tre of pyth, which to devide or lay bare were very dangerous. And the best season for the planting of this Tre is ever in the increase of the Moone at the fall of the leafe, which is from the beginning of October till mynde November, and at nother time, for it would ever have a whole Winter to fassen his Root and to gather strength that it may budde forth his leafe in the summer following.

The Birch,

Wythch, as Theophrastus writeth in his fourth Booke, is a Tre very meete for Woods: it prospereth in colde Countries, frostie, snowis and gravelly, and in any barraine ground, wherefore they use in barraine grounds, that serue for no other purpose to plant Wythch. Pine Woods, Fyre Woods, Pitch tre, and Larsh, are common in Italy about Trent. The pine tre, is planted of his kernels, from October to Januarie, in hot and dry Countries: and in colde and wet places, in Februarie or March: the kernels must be gathered in June, before the clogges doe open, and where you list to set them, either upon hilles or else where, you must first plow

The Pine.

plow the ground and cast in your saede, as ye doe in sowing of Coze, and cover them gently with a light harrow or a Rake, not covering them above a hand broad: you shall doe well, if you lay the kernels in water thre dayes before. The firre tree, ^{Firretree.} leuech not to have any great adoe made about it: if you be too curios in planting of it, it will grow (as they say) the worse, it growes of his owne kernell in wilde Mountaines, plaines, or any where. The pitch tree, is a tree of the kind of pines, and very like to the pine sweating out his Rozen as ^{The pitch} tree. he doth so; there are sixe kinds of these Rozen trees, the Pine, the Pitch tree, the wilde Pine, the Firre, the Larish, & the Tarte tree, the planting of them all is alike. The Alder, a tree also ^{The Alder} mette so; Woods, it groweth in plaine and marshy places neare to Rivers. Theophrastus saith, it yeldeth a fruitfull saede in the end of Summer: many places are commodiously planted with Poplars, whereof there are two sorte, the White and Poplar, Blacke; the White is planted of the Branches and setts, and ^{white and blacke,} delighteth in watry places, or any other ground, it prospereth very fast: the blacke hath the ruggedder bark, his leaves round while he is young, and cornered in his age, white underneath, and greene above. The Lymber herceof is good for buildings, specially within doores: his wood is whitish within, and the rinde blackish, whence he hath his name.

Though Homer call the Willow a stritlesse tree, because his fruit turneth into cobwebs before they be ripe: yet is the so. ^{low,} beraigny given him amongst Woods that are usually sold. Cato gibeth the third place of husbandry grounds to the Willow, preferring it either before the Olive Grove, Coze ground or Heddon, so; it is easier to be cut, and groweth the thicker: neyther is there so great gaine with so little charge in any thing. It delighteth in watry grounds, darke and shaddowie, and therfore is planted about Rivers and Lakes, howbeit it groweth in Champion, and other ground. It is planted of young settes, fourteene and a halfe long, and well covered with earth: a wet ground requireth a greater distance betwixt them, wherein you shall doe well to set them fourteene settes a funder, in other like the Cinke upon a Dye: in the dry ground they may be sette thicker together, yet Columella would

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Ohar.



The plant-
ing of the
Willow

would haue them the fute distant, for passing by them. There are two sorte of willowes, one sort enduring for ever, called Osier, serving for making of Baskets, Chayres, Hampers, and other Countrey stuf: the other kinde growing with great and high branches, serving for stayes to vines, or for Quick sets, or stakes of Hedges, and is called Stake Willow. Also they serue for fence, for Fewell, to make harrowes, Cart saddles and hor'chames: now for the setting or planting of the Willow you are firt to respect the place which wold ever be low and moist, the water sometimes washing them, sometimes Cooling them, and ever giving them comfort, it wold be planted upon Banks where it may stand more dry then wett; for such prosper best and endure longest, as twelue, fiftene, nay one and twentie yeares: whereas those which are set close by the water, will hardly endure seven, but not above nine at the most. Touching their planting they be set two manner of wayes, but which is the best is not yet agreed on amongst husbandmen. The first is to take a great Augure, full as large in compasse (though much shorter) as that where with you Boare Pumpees, and with it boare an hole in the earth, two scote and an halfe depe, then having headed some of the choycest Willlowes, take the fairest and straightest of those lops, and then cutting them sloapewise at both ends, leaving no superfluous twiggs about them, put the bigger end boorne very hard into the earth, and then with mould that came forth, ramme the earth close and hard about the set, so as no reasonable strength may shake it: Now therebe others which in stead of an Augure take only an Dakin or Ashen stake of the bignesse of an usuall set, and with a Batell dyre it into the ground two scote and a halfe, and then by shaking and opening the earth pull it out againe, then put in the set as before shewed, and beate and tread the earth close thereunto, and there is no doubt of the well prospering thereof; this labour may be done either Spring or fall, and one god workman may set 200 sets in one day. Now for the ordering and government of the Willlowe after their planting, you shall after every flood see if the water haue driden any of them away, & immediatly mend them. If any Cattle shall pill or Wacke them, you shall pull up such sets, and place new in their Roome; you may hea-

Ordering
of the Wil-
low.

or loppe your Willowes once in thid yéeres or five at the utmost, and when you see the Bodges waxe hollow you may digge them up for the sice, and sise new setts in their places *.

The Osier commonly groweth of his owne selfe, and is also planted of his Rodes, in watrie and marshy grounds, the earth raised up, and layd in furrowes : it is planted, and springes most plentifully, where the earth is beaten up with the rage and ouer-flowings of the water : it serueth as a sure defence for making of Bankes and Walles in Marshes, and that chiefely in March, the Spone encreasing: the Osier may be cut every yare, or every two yéere if you will.

Now I will procede with Coppisse Woods, that are continually to be feld.

This Coppisse, or sale Woods, were first brought up (as Plinic saith) by Qu. Martius. This kinde of Wood groweth commonly of his owne accord in Forrests, and watrie places : but all Woods are not so; this purpose, so; some Trees there are which if you cut and poule often, will fade and dye, as the Ashe, the Juniper, the Chestrie, the Firre, the Apple, and the Hertie: and some againe if they be not cut, will perish: In cutting of them (as they are divers) so is their order: so the Dake, as hee groweth slowly, so is he not to be cut, before he be of seuen, or eight yéeres growth: & the nearer the ground you cut him, the better he growes, though he may be pollid seven or eight foot above ground: The like is of the Bæch, saving that he may sooner be cut. The great Willow, and the Poplar, are cut after one sort, as I shewod a little before: though the Osier may be cut every two yare, or every yéere. The Chestnut may be feld every seventh yare, both so; fewell, or so; Nine staves. Trees are cut & polisshundry wayes, so either they are feld close by the ground, or the body is polisht, when it comes to be of the bignesse of a mans arme or more, as the Willow is. Coppised Woods are commonly severed into so many parcels, as may serue for yaretly felling, some still growing whils others are a felling, & because some of them grow faster then other some, every sort hath his place, & his tyme appointed. Woods are felled every forth yare, some every fift yare, as the Willow, & Poplar, & Alder, & the Birchsome, once in seuen.

For plan-
ting of
Osiers.

The second Booke, entreating

seven perte, as the Chestnut, and some in more, as the Dake.
17 Now you are to understand that if your Coppis or under-
 wood consist of Dake, Ash, Bach, Cline, Maple, Hasell, Whit-
 thorne, Blackthorne and such like, that then the elder your sale
 is, the greater is your profit: Cleaven being better then seven,
 sistene better then Cleaven, and ons and twentie best of all.
 Now in cutting these underwoods you shall give direction to
 your fellers that when they shall mete with any sayre and
 straight well growne sapling, Dake, Cline, Ash, or the like,
 to preserue them, and let them stand, being of such fit distance
 one from another, that they may not hinder or trouble each o-
 ther, in their growing; and when you shall finde upon a cluster
 many faire plants or saplings of one kinde, if they be of equall
 height you may preserue divers, allowing them reasonable
 distance, but if they be of unequal height then save none but the
 chiesest, and such as are farthest asunder. Also if you finde any
 faire and well graine stuite trees, as Chestnuts, Pease, Her-
 tises and the like, you shall let them stand and cleare them
 from the droppings of the taller Trees: Now so the generall
 cutting up of the Wood, you shall cut it about six inches a-
 bove the ground, and drawing your stroaks upward, cut the
 wood sloape-wise so that is best to hasten on the new spryng.
 And those weavets which you preserue and suffer to grow still,
 you shall proune and trimme as you passe by them, cutting a-
 way all superfluous Branches, Hosses, twigs and young syres
 which shall grow neare unto the roote, or upon any part of the
 Bodie which is fit to be preserued for Tymber, and if you shall
 finde that the earth have by any casualtie forsaken the Root and
 left it bare; you shall lay fresh earth unto it and ramme it
 hard and fast about it".

It remaineth, that I now shew you the manner of fellinge
 timber, and what timber is meetest for every worke.

The season of fellinge, no doubt is to great purpose, whether
 it be for timber or felwell: for such Trees as are feld either in
 the spryng, or in Summer, though they seeme dry without, an-
 notwithstanding full of moysture, and wetnesse within, which
 in the burning, will never make good fire: and therefore
 Coppis and fice wood, your best felling is in Winter: and

for building, it is best cutting of your trees in December, & Januarie, the Hōne being in the iwas, from the twentie, to the thirty day. Yet are there soms that say, they have found by expe-
rience, that Trees being cut in January, are full of sap: and
therefore thinke it better either to cut them before, or after. Cato
saith, the best time is about the twelvth of December, for the
Timber Tree that beareth fruit, is best in season when his seed
is ripe, and that which hath no seed, when it pillos, it is time to
cut. Such as are flaved, serving for pillars of Churches or o-
ther round workes, must be cut when they spring shingles, and
such as the Hatchet must flaw, are to be cut betwixt middle
Winter, and the beginning, in the Wellecne windes. Pliny af-
firmeth the best season for felling of timber, to bee while the
Hōne is in coniunction with the Sunne. Viciuvius an excellent
fellow in building, doth will you to fell your timber from the
beginning of Autumn, till the time that the Wellecne windes
begin to blow, the which windes begin to blow (as Pliny saith)
about the first Ides of February: so; in the Spring, all Trees
are as it were with child, and bend all their force to the putting
out of their leafe, & their fruit. Since then they be happy, & not
found, by the necessarie of the season, they are made by the season
of their losenesse feeble, and of no force: even as the bodies of
women, after they have conceiued, from their conception, til the
time of their deliuernce, are not iudged to be sound, or perfit.
In like sorte the trees in Autumn, when the fruit and leaves be-
gin to fall, the Roots drawing from the earth their sufficient
sustenance, are restored againe to thair olde estate: beside, the
force of the aire in Winter both fasson and maketh sound the
trees, and therefore it is then thought the best time to fell your
timber. The manner of cutting of it this, first to cut it till you
come to the middle of the pitche, and so to let it stand, that the sap
that is in it, may descend and drop out: so shall not the moysture
within putrefie, nor corrupt the timber, but passe clearely away.
When you have cut it, & you see it vise that it hath lest drooping,
you may cut it downe, and so shall you be sure it shall best serue
your tyme. There are some Masters in building, that thinks it
best after you have salone cut your timber in boordes, to lay them
in water for threes or four days, or if they be of Birch, for a lon-
ger

ger time, eight or nine dayes : and being ordered in this wise they shall neither (they say) be rotten, or worme eaten.

There are divers and sundrie uses of timber : such as are harraine, are better then the fruitfull, excepting those sorte wherethe male beareth, as the Cipresse, and the Cornell: in all trees the parts that grow toward the North, are harder, and sounder, which are almost covered with mosse, as with a cloake against the colde : the worst are those that grow in shadowie and watrish places, the massier and better durieng, are they that grow against the Sunne : and therefore Theophrastus divideth all Timber into thre sorte, into cloven, squared, and round, of which the cloven do never rent nor coame : for the pith being bared, dieth up and dieth; they also endure long, because they have little moysture. The squared, and the round, or the whole timber, doth coame and gape, specially the round, because it is fuller of pith, and therefore renteth and coameth in every place. And such high Trees as they use for pillers and maine postes, they first rub over with Bullockes dung to season them, and to sucke out the sappe : for the moysture doth alwayes coame sooner then the dry, and dry better to be sawne then the green, except the Dake, and the Boxe, that doe moze fill the teeth of the Hawe, and resist it. Some againe refuse to be glued either with themselves, or any other, as the Dake, which cleaveth as sone to a stome, as any wood, neither doe they well cleave, but to such as are of like nature : to be boord, the grane is woorser then the dry : the light and the dry, are harder to be cut : for Wandes and Withes, the Willow, the Hosome, the Birch, the Elme, the Poplar, the Sline, the cloven Vede, & the Bramble are best : the Hasell will also serue, but the first is the Willow : they have also a certaine hardness and saitenesse, merte to be used in graven worckes, among those that serue for timber, are most in use the Firre, the Dake, the Wine, the Larch, the Esle, the Elme, Willow, Cedar, Cypresse, the Box, Birch, Plane tree, Alder, Ashe, wilde Dake, Date tree, Beech, wilde Olive, Hawthorne, Walme, Maple, Holly, and divers others, used according to their nature, and the manner of the Countrey where they grow. The firre
tre,

tree, whereof I have spoken before, giveth out Rozen, and his Timber is most so; it is very warke, and greatly esteemed for his height & bignesse, whereof are made the Ship Hatches, & Pillars for houses: for it is very strong, & able to abore great force. It is used also in building for great Gates, & Dvors posts: in fine, good for any building within, but not so well enduring without dwres & very stone set a stee. They used (as Theophrastus saith) in the same time to make their Gallies & long Boates of fire, for the lightnesse sake, & their Ships for burden, of pine tree, & Oak. I have spoken a little before, the timber whereof is best, both for inward buildings, & for the weather, & also well enduring in the water: Hesiodus would have posites make of Oak. The willow standeth also well in water wodes, soit bee not here the sea: for there it endureth not, by reasoun of the saltinesse: it will not be piercened with any Augur, except it be wet before: neither so will it suffer (as Pliny saith) any Spale driven in it, to be pluck, or cut againe.

The Elm is used for weather boardes, and water workes to make planks for lowe moyst vaults, for Patchin Tables or Bul. ^{The use of}
thers Stalls, for Planes of wheeles and Axletrees or any use of ^{the Elm.}
oughnesse. The Ash (as Theophrastus saith) is of two sortes, the one tall, strong, white, and without knots, the other more full of Sap, engendered and harner.

It is the onely Timber of all other for Ploughes, for oxe, mire Axletrees, the rounds of cartwheels, Cartwheels, Coaches and the like, also the Ash, belidg his manifols use other wayes, maketh the best and fairest horsemenes stables and Pikes, whereof was made the stafe of Achiles, which Homer greatly commendeth: It is also the oxe in greene borders.

The Beech, whereof I have spoken before, although it be ^{The Beech;} little and tender, and may be so rite in thin borders, and bent, to be seemeth to seeme onely for Caskets, Boxes, and Coffets: his colour being very faire, yet is he faire and hardie in bearing of weight, as in Axletrees, for Cartwheels. The bark of the Beech, was used in old time for welle to gather Grapes in, and other fruit, and also for Charts, and bellis to the sacrifice withall: and therfore Curios floure, that he broughte nothing away of all the spoile of his enemies, but one pore

Wachten Cmet, wherein he might sacrifice to his gods.

The Alder.

The Alder is a Tre with straight bodeis, a soft and reddish wood, growinge commonly in the watry places; it is chieflie esteemed for foundations, and au water woddes, because it never rotteith lying in the water: and therefore it is greatly accounted of among the Venetians, for the foundations of their palaces, & houses: for being driven thicke i. piles, it endureth for ever, and sustaineith a wonderfull weight. The rinde is pulled off in the Sprung, and serueth the Dier in his occupation: it hath like knots to the Cedar to be cut and wrought in.

The Plane-
tree.

The Plane tre is but a stranger, and a new come to Italie, brought thither only for the commodicie of the shadai, keeping off the sunne in Sommer, and letting it in in Winter. There are some in Athens (as Pliny saith) whose branches are 36. cubits in breadth: in Lycia there is one so greatnesse like a house, the shadow place vnderneath containing 8. score in bignesse: the timber with his softnesse hath his use but in water, as the Alder, but drier then the Elm, the Ashe, the Mulberry and the Cherry.

The Linder.

The Linder Theophrastus counteth best for the workman, by reason of his softnesse: it haedeth no wormes, and hath better vse then the Birch and the Willow, sundry little rindes, wherof they were wont in Plinies time to make Ropes and Clathers.

The Birch.

The Birch is very beautifull and faire: the inner rinde of the tre, called in Latine Liber, was used in old time in stede of Paper to write upon, and was bound up in volumes wherof booke had first the name of Libri: the twigs & boones be small, and bending, wch to be carried before the Magistrate among the Romanes at this day terrible to y use besyng Sachales.

The Elder.

The Elder tre, both of all other trees loneliest and easiliest groen, as experiance teacheth us, and though it bee very full of pith, yet the wood is strong and good: it is hollowed to divers uses, and here light staves are made of it. It is strong and tough when it is drye, and being laid in water, the rinde commeth off as loose as he is drye. The Elder wood is very hard and strong, and chieflie used to boare spears, the roote (as Plinie saith) may be drake in thin boordes.

The Figtree.

The Figtree is a tre very well knowne and fruitfull, not

very high, but somewhat thicke (as Theophrastus saith) a criste
in compasse, the Timber is strong, and fit for many purposes,
and fit it is lost, and holoweth full whatsoever fitches in it, it is
greatly used in Targets.

Boxe tree, is an excellent Tree, and for his long lasting, to
bee preferred before others: it is of espeiall use amongst
Turners, Comb-makers, and spathematicall Instrument
makers.

Juniper drizeth away bermine: for with his labour Woods
and Smalles, and such like, are by no meanes: it is very like to
Cedar, but that it is not so large, nor so high, though in many
places it groweth to a great height: the Timber wherof is
mosteth whited yewes. Since spaciole Hannothe comman-
ded that the Temple of Diana should bee builded with
beances of Juniper, so the emperour Augustus did also keepe
it a long tyme, in somuch as it is said, the rooles of Juniper
timber, haue stoode it selfe together: the Quin toberd of
painters use, is good for all manner of woorke, and for that
The Cedre tree, the hartone of this timber is only wooded & that
it will never rot, may be woonde easie, and certaine. The Cedre
haue built that noble Temple of God, at Betzaleim, of Cedar: It
werte next to the building of Galluses & Canes: The Cedre
the Chen, & the Elme tree, do never chinke nor evane. In the
citye of Cesare Maior was alwaies made of Cedar, because it were
yeloth a excellens, as thought it was. A hospital was founded of
Cedars in Syria, of counte Ciles, & builded in couerre. The Cedre,
the Cedre, so differreth longe frome Cedar, that it is nothing.
Pliny obserueth diverses of 400.000.000 of Cedre wood Theophrastus
telleth of a great strength, & depe root for the stanchnes & bound
fornesse, to bee employed in building. The Cedre树木 is to a
great tree, roundlye lowne, whose Timber is much used in
Buildings, & othere thinges: And tristly, that the Cedre tree shal be
for it selfe, nasyng a certaine bird: Whiche it once
happened in Asia, the people being greatly afraid, fled for
saftey out of the landes. In the wild Elme, of his wood is made
gallows & halles of wondres & amazement. Berries of Holly, is a tree
whiche leves haue full of plantes round about the hale, and the
barkes, being both continually graine, the berries like the Cedar:

Juniper. 207

Juniper. 207

Juniper. 207

The Cedar. 207

206. The second Booke entreating

of the cistes and rotes they make. Birchome; the wood is very
hard, the branches will well winde and baine, and therefore ser-
ueth excellent well for quickset hedges.

The Maple. The Maple, for the beautie of the wood is next to the Cedar,
having a very faire and pleasant grain, of the resemblance
called Peacockes talle; with this wood tables are covered most
delicately, with other fine workes made.

The Date tree. The Date tree, whereof we have spoken before, hath a very
soft wood.

The Cork. The Cork, his timber is tough. If you will chuse Timber
for Stables, Chappes, Shettes, Decks and the like, then you
shall chuse the Cork timber. In this wood sweets and
delicates are thorowly drie, because the wood is in any of these
frances, it is ever drie, longe, and the heart thereof will
never breed bosome, nor will it in any time lose the colour.

Vie of the Maple, Beech and poplar. If you will chuse Timber for Ranchours, Dishes, Bowles,
Tables, and Turners work, so farre as folowing maketh, you
shall then make choice of the fairest and soundest Maple being
smooth and unknotted, for it is the plainest graine & the whitest
of all others, alwaithough either the Beech or the Poplar will
reasonably well serve for these purposes, yet the maple is chiefely
to be preferred before the Beech, and both are used the same, the pitch
tree, and the lime.

For Oyle. The best coales are made of the fallent fomes, and the
Oak, and the lind, Oak being the fomes rather before the
coales that are made of lind fomes, because they better shew
the blowing, and do not so stell as the other side of Casterio,
thowth the wante of rengant. We understand that wood to
make Coales for the Nymys fringes, because as soon as the
Bellomes leaven, the firr sealeth, and there is little work in
it; but for building the chamber therof is alwaithough imposs-
ible, because it doth easily break, and smoulder away: but
being in postas unheated, it serveth well enough within houses.
The aptest to take fire, is the Firre tree, and the Alder tree.
The firre tree because it is soft and open; the Alder tree, for the
fallent fomes and the fatness. So he will finde (as Virgines faith)
relifach the fire, though Marbolene (as I said before) goeth
about to helpe it.

This

This is the opinion of the Ancients, but we finde by exper-
tise, that Duke, Cline and Ashe make your longest and best
enduring Coales. The Birch the finest and brightest Coale,
and the Birch o' Hallow the swiftest burning Coale. Now
for your small Coale, the twigges of the Birch makes
that which kindles soonest, and the white thorne that which
burnes the longest; and the roots and hard knots of any before
spoken of, makes the best Brands*. In all the bodies of trees, as
of lively creatures, there is skin, sinewes, blood, flesh, veines,
bones, & marrow: their skin is their bark, of great use among
Country people: the vessels that they gather their Vines, & other
fruits in, they make of the bark of Linde tree, Firre, Willow,
Bach, Alder. The Cork hath the thickest bark, which though
he lose, he dieth not, so: so beneficall hath nature bene to him,
that because he is commonly spoiled of his bark, she hath giuen
him two barks. Of his bark, are made Pantosles & Slippers,
& Flotes so: fishing Nets, & Angles: if the bark be pulled off,
the wood sinkes: but the bark alwayes swimmeth. The next to
the rinde in most trees, is the fat, the softest and the woorst part
of the tree, and most subject to wormes: therefore it is commonly
cut away. The sappe of the tree, is the blood, which is not alike in
all trees, so: in the Figge tree it is milkie, which serueth as a
Kemmet for Chese. In Cherrie trees, it is gummy: in Climes, sal-
tish: in Apple trees, clammy and fat: in Vines, and Peare trees
watrich: they commonly syring the brest, whose sappe is clam-
my. The juice of the Walberie, is sought for (as Plinie saith)
of the Phisitians. Next to the fat, is the flesh, and next to that
the bone, the best part of the timber: all trees have not any great
quantitiue of this fat and flesh, for the Rose, the Cornell, and the
Olive, have neither fat, nor flesh, nor marrow, and very little
blood: as neither the Herble, and Alder, have any bone, but
both of them full of marrow. Besides for the most part have no
flesh at all: in flesh of trees, there are both veines and arteries,
the veines are broader, and fairer: the arteries, are only in such
trees as will cleave, by meane of which arteries it commeth
to passe, that the one end of a long beame falleth to your eare,
if you do but stripp with your finger upon the other end, the sound
is brought forthwith to your eare, whereby it is knowne, whe- ther

The bark.

ther the piece be straight and even or not. In some trees there are knots on the outside, as the wenne, or the kernell in the flesh of man, in the which there is neither veine, nor arterie, a hard knoy of flesh being clong, and rolled up in it selfe : these are most of pice in the Cedar, and the Maple. In somme, the flesh is quite without veines, having only certaine small strings, and such are thought to cleave best : others, that have not their strings, or arteries, will rather breake then cleave : as the Wine, and the Olive, will rather breake then cleave. The whole body of the Fig is fleschlie : as the body of the Wastholme, the Cornell, the willow Oak, the Spulbery, and such others as have no pith, is all bony. The graine that runneth overthwart in the Birch, was (as Pliny sayth) in the old time soz his arteries.

THRA. There are other commodities beside the timber to be gathered of these trees.

M A R I V S. Very true : (soz as I said before) of the Spearar, the Oke, the Chestnut, the Pine, and the Birch, these trees that grow in the Woods, besides their timber, beare fruit also good and meete to be eaten. So of the Ficles, the Pitch trees, and the Pines, we gather Rozen and Pitch, to our great commoditie & gaine : as of the Oke, the Birch, the Chestnut, the Medlar and the Pine, we have fruite both meat for man, and also good for feeding of Hogs, and other Cattle. In time of dearth, both our forefathers, and we, have tried the god seruice that Acornes in bread hath done, yea, as Pliny & others have written, they were thought to be served in amongst fruit at mens tables. Neither is it unknowne what great gaines some countries get by Acornes Rozen and Pitch : The Gall also groweth upon these Acorn-bearing Trees, whereof I have spoken before. Amongst all the trees out of which cunneth Rozen, the Tarre tree, a kinde of Pine, is fullest of sap, and softer then the Pitch, both meat for mee, and light, whose boordes we use to burne in steds of candels. The Cedar sweateth out Rozen and Pitch, called Cedrin. Moreover, of Trees, is Birdlime made, the best of the Cerre tree, the Wastholme, and the Chestnut, specially in the Woods about Seneca, and neare the sea side, where they are carfully planted in great plentie, by the Birdlime-makers : for they gather the berries from the trees, and boyle them til they break,

and after they have stamped them, they wash them in water, till all the flesh fall away. Pliny affirmeth, that it groweth onely upon Okes, Walkholme, Sikkades, Pine trees, and Firre. Birdlime is also made of the rootes of certaine Trees, specially of the Holly, whose rootes and barkes withall they gather, and lay them up in trenches, covered with leaves in a very moist ground (some doe it in dung) and there they let them lie till they rot, then take they them out, and beate them, till they ware clammie, and after wash them in warme water, & make them up in balles with their hands: it is used (beside other purposes) for the taking of Birds. Besides all this, there sweateth out of Trees a certayne Gumme knotone to all men, as of the Cherry tree, the Plumme tree, the Juniper, the Olive, the Blackthorne, the Iuie, and Almond. Out of the Juniper, commeth vernish: Vernish.
out of the Spurthe, Stoyar: out of the white Poplar, Amber. Amber.
Plinic writeth, that Amber commeth out of certaine Pine trees in the sea, as a Gumme both from the Chertie trees. And thus these things that I have here at your request declared, touching the order of Planting and sowing, I beseech you take in good worth.

Soli Deo laus & gloria, per
Christum Iesum;

The end of the second Book.



The third Booke:

Of Feeding, Breeding, and Curing. of CATTELL.

HIPOCONVS. EYPHOREVS. HEDIO. EYMAEV\$,

Hat the briding and feeding of Cattell
is a part of Husbandry, and more joynd
in kindzed to the tillture of the ground,
not only appeareth by Virgill, the Prince
of Poets, who hath in his Georgickes
thoroughly set forth the order therof, but
also by the witnesse of the more ancient
philosopher, Xenophon, and Aristotle.
The like doth our common experiance at home daily teach us:
so; albeit the trade of Tillage and keeping of Cattell is divers,
and the manner of occupying many times contrary the one to
the other: as where the Trafier & Weder, requireth a ground
full of Grasse and Pasture, the Husbandman on the other side,
a ground without Grasse, & well filled: yet in these their divers
desires, there appeareth a certaine fellowship and mutuall com-
moditie redounding in their occupying of one the other, which
Fundavius in Varro, doth steme by an apt comparison to probe: as
in a couple of Shalmes, or Recorders, saith he, the one differeth
in sound from the other, though the musick and song be all one
(the one sounding the Treble, the other the Base) in like man-
ner may we terms the Trafiers trade the treble, and the tillers
occupation

occupation the base, following Dicxarchus, who reporteth, that at the beginning, men lived only by hunting and feeding of Cattell, not having as yet the skill of plowing and tilling the ground, nor planting of trees. Afterwards in the lower regions, was found out the maner of tilling of the ground, and therfore beareth the base to the fader, in that it is lower; as in a couple of Necopots, the base to the treble. So this usynge to keep cattell for plowing, sariage, dunging of our ground and other commodities: and on the other side, to till the ground for sowing and maintenance of our cattell, it comes to passe, that though the maner of occupying in tillage, and keeping of cattell be divers, yet one of them so shortly the same or the other, that as it seemeth, they cannot well be a hundred: for without the service of Horses and Oxen, we can neithet plow nor dung our ground. Challe, Bratu, and other offall of corne to ryghter to be spent upon the ground, then to be sold, both for the Farmers behoife, and the Lorde, and better bestowed upon the household cattell, than upon the peynefornes. Besides, the dung of the cattell enricheth the ground, and byngeth geat increase: and whereas there is no place (as Columella saith) but in the tillage of the ground, they helpe as much inde of cattell, as men: the cattell serve not onely for tilling of the ground, but also to bring in corne, to beare burdens, carryingng for the graine & also forward and inwarde of the stocke: wherby they have their name Jumenta, of helping, because they helpe and susteine us, either in our labours, by plowing or bearing. Neither is it onely sufficient to maintayn and bring up this kind of great cattell called Iumenta, but also the other lesser sort of Beastes, as Whope, Yowles, Goates: and of fowles, Gars, Sparrows, Duckes, Pigeons, Henries, Chickins, and other poulties: and things belonging to Husbandry, wherewith the good Husband, beside his owne susteineance maketh great gaine: and if the ground be so; it, there ariseth oftentimes as great profit, as in holding of Cattell, and that with smalier charges. For a profle that seving is gainefull, the wordes Pecunia, money and Pecullius, substance, riches, being both derived from the Latine name of cattell, may very well serue: for in the old time they used their cattell (instead of money) and their comon penaltaries fines, taken

from the
late Charles
Campion
printed to
Mus. O. R.

taken in cattell, the greatest was thirtie Oren and two shewe, every shew valued at v. s. vi. d. and every shewe at vi. d. The smallest was a shewe; the very like is yet observed with the noblest & warlikest people, whose substance lyeth altogether in cattell. Cato being once asked by what part of husbandry a man might soonest be made rich: made answer, By Crazing: ana being asked againe, which way he might get sufficient libelhood: he answered, By meane Crazing. Moreover, that the methynesse and first originall of keeping of Cattell is of greatest antiquitie, and that the trade thereof hath alwayes, from the time of the Patriacks hitherto, bene counted most honest, as well the scriptures, as prophane histories doe witness, which kind of life, how acceptable it hath always been to God, by those that liued in the flesch world, both plainly appearre. But omitting further commendations which are needless in so good a cause, I have here thought good, after the entreating of Village, Gardening, and Orchards, to describe as briesly as I can, the order and manner of keeping of Cattell: which skill though Varro divideth onely into thise parts, I have besides into souce. In the first part I put the great Cattell for burden, as Horses, Asses, Mules, and Camels: in the second part, the leffe sort, as shewe, Goates, and Swine: in the third, such things as are belonging to the keeping and safegard of Cattel, not for the profit they yeeld of themselues, but for their necessary use, as shewheards Dogs, and Cats: of these thise parts, in this third Booke, I entreat off: the fourth I referre to the fourth Booke: Therefor god Hippocamus since both time and place requireth it, let me heare what you can say touching the Government, us, and ordering of the Horse, which may worthily challenge the chieffest place; being the noblest, the goodliest, the necessarieſt and trustiest Beast we use in our service, and first give me the signes of an excellent Horse, then his ordering and breeding.

First, you shall know that Horses serue for sundry purposes. Some, for the plow, the Cart, and the Packsaddle, others, for light Horses, Couriers, and Horses of seruice, others againe, for Stallions, and breeders: and therefore they must be chosen according to their seruice, ſoldiers, and men of Warre, desire a ſtreke

The wor-
thiſſeſſe and
antiquitie
of keeping
of Cattell

fierre Horse, courageous, swift, and well coloured. The Husbandman would have his Horse gentle, large bodied, and meet for travell and burden. Notwithstanding, the breeding and bringing up of them, is almost one: for in their breeding, lies hope to bring them all to the saddle.

He that hath a fancies to braise Horse, must first prove him selfe of a god Race, and then of good ground, and plentie of pasture, which in other Cattel ought not to be so greatly obserued, but in Horses there must be speciall care thereto. And therefore, you must first see that your stallion be of a god race, well proportioned, and framed in every point, and in like sort, the Mare. Some reckon their goodness by their Countries, as thus; if you will braise for Martall and Warre imployments, then the Neapolitan, the Sardinian, the Almaine, the French are best, or any of the Bastardized in themselves, or with a faire well shaped and well mettall'd English Mare.

If you will elect for swiftnesse and service, then the Arabian, the Barbaric, the Spanish, the Greeke, or any of these Bastardized in themselves or with the best English Mares. If you will braise for long travell and service, then the English, the Hungarian, the Sweatchland the Poland, the Irish. If you will chuse for fraught burthen and service, then any of the Seventene Provinces, either Bastardized in themselves or with out English races. Next

The shape and proportion of the Horse, ought heidly to be considered, for the very looke and countenance oftentimes declareth the goodness of his nature. Therefore you must diligently consider his making, from the heele to the head, & first you must chieffely regard his feetes: so as in bierwing of a horse, it is in vaine to regard the beauties of the upper Rumes, if the foundation be ruinous: so the Horse that is not sound of his feet, will neither serve the Husbandman, nor the Trauiler. In your looking upon him, therfore you must first consider his hoves, that they be not slender and soft, but hard and sound, round, and hollow, that the holownesse may keepe his foot from the ground, and sounding like a Timball (as Xenophon saith) may declare the soundnesse of the foot: so the horse that is full and fleshy, is not to be liked, and the Horses that have such

The Noses

such boordes easly halt, wherefore divers command a Hoare like the huse of an Ale, the pastures next to the huse, not too long, as the Goat hath, for shaking off his rider, and breaking of windgalls, nor too short, soe being hurt in stony ground. The legs and the thydes, sith they are the stanchers of the body, they ought to be even, straight, and sound, not genty, with much flesh and veines, soz such as he thei legs clad with much flesh & veines they with great ioynes grete ful of windgalls, and swellings, which will cause them to halt, which legs at the first foling, are as long as euer they will be, by reason wherof you may gesse what hight the Hoare will be of, being yet a Colt. The knees must be round, flexible, and small, and not hoining inward, nor stiffe, the thydes large and well brawned, his heaff great and broad, his necke soft and broad, not hanging like a Coates, but upright like a Cockes, and well reining, his Mane thicke, falling on the right side, some like it better on the left, his head small and teame, for a great and heaþie head is a signe of a dull Jane, his mottell shart, his mouth wide, with large wimckles, still playing with the Wit.

The mouth.
The eyes.
The ears.
The noft-brill.
The shoulder.
The chine.
The sides.
The loins.

The Hoare that hath a wy mouth is naught, his cheake bones or Jaines wouds be thyne, and wide with a great weſtand, soz a narrow Jane ſheweſ a ſtrait wond and an ill carried head: his eyes great, and ſtory, and ſtaunding out of his head, whiche is a signe of quichenesse, and libelinenſſe: hollow and little eyes are naught, and blacke, exalte ſtans in the eyes are to be diſpealed: theſe faults are best ſpied in the night by candle light. Colurnella conuenient blackeyes. A boall eye is very good, ſuch as they ſay Alexander's Bucephalus had. Cheeves muſt be ſhort, ſtaunding upright, and ſlitting, for the example the tokens of a Hoares ſtrongche, which if they be great and hanging, are ſignes of a Jane. The poftboiles muſt be wide, the better to receiue ayre, which alſo declareth a libely courage: his ſhoulders large and ſtraight, the ſides turning inward: the ridge-bone over the ſhoulder being ſomething high, giues the Hoiferian a better ſeat, and the ſhoulder, & the rest of the body is stronger knit together, if it be double: his ſides deep, well knit behinde, & something bowing up, which both is better for the hoiferian, and a ſigne of a great strength: his legges, the haundes they be, the

the better he listeth his fassets, and followeth with the hinder,
and his paunch shall the teste appear, which both disgraceth
him, and burtheneth him: his belly must be gaunt, his buttocks
large, and full of flesh, answerable to his brests, and his sides: The belly.
The but-
tocks.
soz if he be broad hanched, and well spred behinde, and goeth
wide, his pace will be the surer, which we may perceive in our
selues, if we againe to take up a thing from the ground stryding,
and not with your legs together, we take it up with more ease &
strength. His tayle should be long, bristly, and curied, the length
whereof is not onely a beautie, but also a great communitie to
beate away flies: yet some delight to have them cutayled, especi-
ally if they be hounchettockt. In fine, the whole body woule be
so framerd, as it be large, high, liuely sprighted, and well trussed.
Some booke men woule haue their booke to be limmed after the
proportion of divers beastys, as to haue the head & legs of a Sotag,
the eares and tayle of a Fore, the necke of a Swane, the brest of a
Lion, the buttocks of a Wostenan, & the fist of an Aile. Other co-
ditions there be, soz which they be liked, when they be pleasant,
liuely, gentle, and tractable: soz such, as Colynella saith,
will bath better be taught, and better abyaw with travell. Xeno-
phon accounteth it a signe of a god booke, if after the wearines
of his iorney he come to labour iustly: again, the better the
booke is, the deeper he thrusts his head into the water when he
drinkeith, and that (being a Colt) drieth to out runne his fel-
lows in the pasturage, and as Virgill saith, leape full into the wa-
ter, and passeth bryges, not carrying for any other, nor fearing
the floures.

Touching the colours, there are divers opinions, and of all
masons, lightly you shall finde both god and bad: so that the
colour is notis greatly to be regarded, if he have other tokenes of
a god booke, yet soz beautie, and manytimes for gaudiness, we
make choyce of colour. The best colours, as divers suppose, are
these. The Dapplegray for beautie, the Whosome-Way for sombre,
the blacke with bluer bryges for Courage, and the Ryards or
true mist Whome for continuance, as for the booke, the Whiche
without whitte, and the unchangeable Irongray, they are repre-
sed Cholleriske, the Whight-hay, the Glea-bytten and the black
whic white matches are Hangymists, the blanke white, the
yellow

yellow dunne, the Riteglowed and the Pyebald are flagranticke, and the Cheunut, the spawdunne, the Redde Bay and the blew gray, are Melanchollie*: they are the better that have a starr in the soxhead, and the stote spotted a little with white.

The Flea-bitten Horse probeth alwayes god and notable intruell: the yellowish and the skued, or piro Horses, are discommended almost of all men, notwithstanding either of them (if they be well marked) prove oftentimes well enough, specially the yellowish, if he have a blacke list downe his backe from the necke to the taile. The stallion therefore would be of one colour, strong bodied, well limmed, according to the proportion above. The Mares would likewise have the said proportion of the stallion, specially to have large bodies, faire and beautifull, of one colour, great bellied, with large and square breake and buttockes.

The Stallion.

The Mares.

Age.

E v r. What Age count you best for herte? H i r. The stallion may goe with the Mares when his ioynts and limbs be well knit and come to their growth, soz if they be too young, they get but weake and weakly Colts: some use to let them goe together at two yeres old, but three yeres old is the better: the stallion will serue you from that time till twentie yere, it hath bin seene that they have gotten Colts till forty, being helped a little in their busynesse, for it is not yeres but skill that abateth lust, as Aristotle before Plinie wrote. Yet some think them not merte for brare before the fourth or fift yere, in which space they ride them lustily, to make them more couragions, for the lustier they be, the better Colts they bring, neither would they have under sixtene Mares, nor above twenty, for one stallion. Herodotus wryteth, that one Horse will suffice twentie Mares; but the number ought not alwayes to be obserued, but sometimes more, sometimes lesse, according to the state of the Horse, that he may the longer endure: a yong Horse shold not have above fiftene or sixtene Mares with him: the horses must be sometimes severed for danger and hurting of themselves, having in the mean time good regard to the state of his body, for some be weaker and fainter then others.

E V P H. What age doe you thinke best for the Mare to goe to the Horser?

H I P P O. The Mares will conceive at two yeres old, but I take it the better not to suffer them till they be thre yeres olde, and likewise I thinke them not miete for Colts after tenne, for an olde Mare wil alwaies bring a bul and hearie headed Babe: they goe with Foale an eleauen moneths, and Foale in the twelveth.

E V P H. How can you know their age when you be doubtfull of it?

H I P P O. That may you know divers wayes, but specially by the teeth. Aristotle affirmeth, that a Horse hath foxtie teeth, of which he casteth the thirtieth moneth after his foaling fource, two above, and two beneath: againe in the beginning of his fourth yere he casteth likewise fource, two above, & two beneath; being full fource, and going upon his fist, he casteth the rest, both above and beneath: such teeth as come up againe be hollow: When he beginneth to be sixe yeres olde, the hollownesse of his fist teeth is filled up: in the seventh yere all his teeth are filled up, and no hollownesse any longer to be seene: after which time, no judgement of his age, by his teeth, is any more to be had: there are some that take upon them to tell his age by the ioynts of his taile, after the marke is out of his mouth. Palladius shewes, that a Horse when he begins to be olde, his temples ware hollow, his eye-bates gray and his teeth long. Aristotle saith, that the age of all fourte foorted beasts may be knowne by the skinnes of their Taires: for if it be pulde up and presently let fall againe, if it fall smooth, it declares a young beast, if it lie in wrinkles, it sheweth he is olde. A Horse liveth commonly twenty yeres, some thirtie, or foortie, and alio to fiftie, as Aristotle saith, if he be of a good disposition, and well dieted: it is said there have bene Horses that have lived 75. yeres, the Mare liveth not so long as the Horse, nor the Stallion, so long as the Horse that is suffered to runne amongst Mares: the Mare leaveth growing at five yere old, and the Horse at seven.

E V P H. What time thinkes you best for covering of Mares?

H I P P O. In the spring, after the twelveth of March, I take to be the best; after the spring in the rest of the yere they are to be

be kept from the Horsse, for hunting of the Horsse: for the Mare after she hath conceived, suffers the Horsse no more; but bentes, and strikes him with her hailes, yet in most places, they suffer their stallions to turne with their Mares all the summet long, and take it to be the best way for answering the Mares desire, for many times the Mare will not abide the Horsse till summet time, or August, and the August Colt probes commonly very faire, although the Colts that are foaled in the Spring, are not to be desired, because they turne all the yere with their dammes in god pasture, and therefore it is best at that time to put the Mare to the Horsse, for these creatures specially, if you restraine them, are most enraged with lust, whereof came at the first the name of that deadly poison Hippomane, because it stirreth up a fleschly affection, according to the burning desire of beasts, which groweth in the foreshaen of the Colt of the quantitie of a Fig, and blacke, which the damme doth straight, as soone as she hath foaled, bites off: & if she be preuened she neitherordes the Colt, nor suffereth him to sucke.

E V P H . What if the Mare will not take the Horsse, is there no meanes to make her?

H I P P O . There are that rub her taile with red Onions, Pettles, or Hadder, and so provoke her to lust, sometime a scurrie Jade is put to her, who when he hath gotten her god will, is straight remov'd, and a better Horsse put in place. If the Horsse be too slotfull, his courage is stirred up by wiping her taile with a Spunge, and rubbing it about his Post. If we would have a Horsse Colt, wee knit the left stome of the Horsse with a corde: and so a Mare the right. The like is to be obserued almost in all other beasts.

E V P H O R . How often must she be Washed before she take?

H I P . They take not a like, some are sped at once, some twise, some more. It is said, a Mare wil not suffer above fifteen times in the yere: being oftentimes satisfied with siluer. They must be put to the Horsse at times, twise a day, in the morning, and at night: when they are sped, it appeareth by refusing, and striking at the Horsse. They say, that there is amongst these beasts a great regard of kindnes, and that you can hardly force the Colt to Horsse the Damme: for passe whereof they report, that where

that where as a certayne Woole-keper did make his Woole, by
coveting his eyes, to cover his Damme, the clath being pulled
away, when he saw what he had done, he ran upon his keeper,
and slew him. As soone as she is covered, the Mare must out of
hand be beaten, and forced to runne, least she lose that she hath
received. Surely a Mare of all other beasts, after her covering,
both runne either southward, or southward, according as she
hath conceived either Woole Colt, or Mare Colt: her colour also
both change & become brighter, which when they perceive, they
offer her the Woole no more. Some after a few dayes if they
doubt her, offer the Woole againe, and if she refuse and strike
(as I said before) they judge she hath conceived.

E V P H O R. Must they be covered every yere?

H I P P O. Such is our covetousnesse, as we sike to have them
beare every yere: but if you will habe god Colts, let your
Mares goe to Woole but every other yere, so shall they well an-
swere your desire, howbeit the common us is every yere.

Wile sir Mses sometimes to cover Mares commonly, and ther-
of is engendred the Woile, and foaled in the xiij. moneth, as shall
be said hereafter. Some say it is best to cut the mane of the
Mare that shall be covered of the Isle, though others hold opinion
that it shall abate her lust. The Mares that be with foale,
must be well looked unto, & put in god pasture. And if through
the colde winter, pasture be wanting, they must be kepe in the
house, & neither laboured nor jasset up and downe, nor suffered
to take any cold, nor to be kept too many in a straight roome, so
cailing their foales, for all these inconveniences will hazard
their Foales: yet to travell them moderately, wil do them rather
good then harme, so too long & it will cause them to be restisfe,
and to tret sooner. Aristotle writeth, that the Scythians did use
to travell their Mares great with foale, after the time they be-
gan to stirre, supposing their foaling shoulde be the easier, but
yow hede must be taken, that their bellies be not hurt with any
thing while they are with foale: but if so be the Mare be in dan-
ger, either in cailing her foale, or in foaling, the remedy is Po-
lipody Camped, mingled with warme water, and given with a
bowne: it is said that the smell of a Cannell bowne, causeth them
to cast their foales: you must every yere observe your Mares,

The third Booke,

and such as be unprofitable, as barren, must be put away, so
 from their first foaling they are not to be kept above ten yeres,
 at which time they are fully enough, and may be wel sold, but so
 wil they not be after. The yong foales are not to be handled with
 the hand, for they are hurt with the lightest touch that may be.
 It must be note unto you, that if the Mare be handled, there be come
 strongly for her & her Foale, & that the place be warme enough,
 that neither the cold harme it, nor the Warme overhit it, and
 therefore the place must be well chosen, that is, neither too hot,
 nor too colde, & afterwards by little, you must bring up the Colt:
 when it groweth to be somthing strong, it must be put to pasture
 with the Mare, least the Mare receive hurt by the absence of it:
 for chiefly this beast of all others, most easeneth her yong, & if
 she be kept from it, taketh harme. The Foale that lackes his
 Warre, is often brought up, of other Mares, that have Colts:
 the Mare must go in very good pasture, that the Colt may have
 space of milke. Being five moneths old, when you bring them
 into house, you must feede them with barley susterne & branmeat a
 twelue moneths old, you must either put them into god pasture,
 or feede them with Branme, Challe, and Hay. Varro will not
 have you to weane them, till they be two yeres old: and
 though I like not too soon weaning, yet uses we commonly to
 weane them at five or sixe moneths old, to let them run in god
 pasture, which custome probeth not amisse. Wherefore as long
 as they run with the Warre, you shall doe well to handle them
 noys & then, least when they be put from the Warre, they ware
 wilde: they must be taught to be gentle, and not only to abide a
 man, but to covet his companye, and not to be afraid at every
 strange sight, nor at every noise, but to come to it. Xenophon
 saith: we must (as men) provide Scholemasters for our children
 & likewise teachers for our Horses, and appoint how we will
 have them broken: for as their service is divers, so must be
 their breaking. We herof we shall speake more hereafter,
 when we entreate of Hopemanship, and breaking of Horses:
 onely now we will deale with those that suche, and serue for the
 plow. To make them gentler, the bridles and other horse han-
 nelles must be hanged by them, that they may the better be ac-
 quainted with them, both with the sight, and the gingling. Now when

when they be well tamed, and will suffer to be handled. Varro would have you lay a wog grobeting upon them chis, or thysle and after to bescide them, and this he would have done, when they be than yere old, for then they graze most, and begin to be great hauntes. Where be that thinke a Horsse may begin to be handled at a yere and a halfe old, and Varro, at that yere old, when their probender is giben them: but we are commonly after two yeres to labour them gently, first in harrowing of new plowed land, which is god both for their stoc, and their pace, and also with plowing, and such like exercizes: whereby we are to acquaint them with colde and heate, in drawing together. It must be seene to, that they be even matched, least the stronger spoile the weaker, while he beareth the rating and whipping. Horses take less harme with draving then with beating. Thus must they be used to reasonable travell, by reason whereof the will be they harder, and not so lightly take harme: but herein must be great discretion.

E V P H. What say you to Geldings: for in these parts we use Geldings most.

H I P P O. They serue for some purpose: but he that will have of good a good Gelding, must geld (as they say) a god Horsle, they are cut downe at a yere old and elder: I my selfe have cut them at five yeres old, and sixe yeres old: in cutting they lose their stomache: you must looke that they be in god plight when you cut them, for as they are at their cutting, they commonly contynue. The spars also use to be spayed, but not often, and with great danger.

E V P H. What manner of stable would you have, for I have sometimes heard, that the Stable is of great importance?

H I P P O. Your stable must be built in a dry place, for wetting The Stable the Horses hors, which you shall aboe if you plankes it with good Dene planke, o: (which Xenophon would rather have you doe) with couers padding stone, keping it alwayes cleane from dung, & deates, and after laying fresh litter, so as they stand hard, and lie soft. Xenophon would have the stable so placed, as it may alwayes be in the spakers eye, & to be lightsome, least the Horse being used to the barkie, his eye dasell at the light. Some thinkie they will be the gentler, if they be used to the light, & the fairer, if they haue the sun at the rising in summer time: let

as much aire come to them both day and night as you can. In winter your stable should rather be warme, then hot, and therefore your stable must stand toward the south, but so as the windows may open toward the north, which being kept shut in winter, may be warme; and opened in summer, you may let in the cold aire.

E V P H. The like we use in our Ox stalls.

H I P P O. Besides, whereas the bodies of cattell, have nade of tubbing, as well as mens bodies, so many times it doth the horse as much gud to be stroked down the backe with your hand, as to feed him. The horse is to be continually curried, in the morning, at night, and after his labour. In currying of them we must begin at the head, and the necke: soz it is a vaine thing to make cleane the lower parts, and leau the other soule. It is god also to obserue due times for his feeding, his watering, and his travell. Thus much of his exercise. Now followeth to speake of his diet: and because we have spoken before of his pasture, we must also say somewhat of his other feeding. The better a man would have his horse to proue, the better must he looke to his meat for that good feeding (the Country people say) is a great helpe to the godnesse of the horse. If the horse be young (as I said before of colts) he must be fed with grasse, chasse, and hay: if he be elder and more to traualle, his fode must be the drier, as Chasse, Weanes, Peasse, Dates, and Hay. Chasse both holde well nourish by treason of the drynesse, but it kepes the body in god plight: and because hard meate is hardest of digestion, it is therfore to be given to those that labour. The stock or stud, must be pastured in large pastures and marshes as also upon mountaines, & hilly ground, but ther well watered, not dry, rather champion then woodie, & rather soft sweet grasse, then high and flaggy: if the pasture be too shott, they sooner weare their sore teeth, & are toothlesse before their age. And whereas every kinde of creature is naturally moist, a horse ought chiefly (whether he be young, or old) to be fed with moist pasture, for the better conseruation of his naturall temperature. Some would have you in no wise to give your horse grasse in the spring time, but in June, or the fall of the leaf: they would have you give them grasse with the dewe upon it, & in the night season

Curying.

Dyer.

season, Dates, and Hay. Howbeit, in the colder Countries, in Germany, France, England, where the pasture is very good, they doubt not to scouze their horses with gréene grasse & wiedes ^{scowing,} of the meddowes: and in the hotter Countries, they do the like with gréene blades of Wheate, or Barly. Some use to give them Apples shred in pieces, Coleworts stalks, Cabadge-leaves, Carrets, gréene Rye and such like, to scouze them withall, and thus much of scowing of horses. Generally, whosoever will have his horse healthy, and able to endure travell, let him feed his horse with Dates, mingled with chaffe or straw, so shall he be temperately and well fed, and if so hee labour much, give him the more Date. His meate must be given him as some thinke best, in a low Hanger, set so low, as they are forced to eate their meat with some difficulty or travell, which they say is to make hem bend their necks: by which exercise both the head and the necke groweth bigger, and they will be the easier to be bridled: besides, thay will be the stronger, by reason of the hard setting of the sore-fete. Howbeit, in some places, they use high standing Hangers: after what sort soever they be, they must alwayes be kept cleane, and well swept before you cast in their meate. Their Prouender, though divers horse-cousers that live by sale of horse, doe fede them with sodden Rie, or Beanes-meale sod, pampering them up; that they may be the fairer to the eye: yet is it not good to labour with. The best Prouender that is, is Dates, and for default of them, Beanes dyed or Beanes spelleed, or Pease dyed and mixed with Dates, Chaffe or Garbage, which is Wheate and Straw shred small together. Their Prouender must be given them rather often, and little, then once or twise a day in great portions, least you glut them therewith: they are used to be fed commonly five times a day, when they stand in the Stable, keeping an equall number of houres betwene the times: when they travell, you may give them meate seldom, but in greater quantity, and if their iournies be long, they must have Prouender besides in the night, alwayes remembzing (as I said) that you glut them not. The better a Horse fideleth the better will he labour. You must also beware that you give him no Prouender, neither Dates nor Barly, after any great labour, till hee be thorow-

Prouender.

cold: notwithstanding you may give him a little hay to cole his mouth. The hay must be sweet & well made, and thorowly shakē, before it be cast into the rackinge: and specially seene to, that there be no feathers of any fowle amongst it. If the horse be very hot after his labour, let him be well covered, and softly walked till he be cold, before you set him up: when he is set up, litter him well, least the colndesse of the ground strike into him: in any wise wash him not when hee is hot, but when hee is through cold, water him, and wash him, wiping him dry when you bring him in. If the horse losse his meat, some use to stampe Garlick and Pepper, and to give it him, rubbing his teeth well, till his stomacke come to him: some would have a clout wet in salt water, tyed upon a sticke, and thrust into his Jaws. In watring, you must luke well unto hym, soz (as Aristotle saith) bealks doe faede, and are nourished the better, if they be well watred. Horses and Camels, doe love best to drinke a shiche water, in so much as if the water be cleare, they will trouble it with their faete: soz the most part Bullocks againe desire a saice cleare water, and running. The same Aristotle also affirmeth, that a Horse may suffer thirst fourteene dayes without drinke. Varro wils you to water your Horses twise a day, which order we obserue, that is once in the morning, and againe in the afternoon: but in Winter, if they drinke but once a day, it sufficeth: before you water him, he must be well rubbed, and then led into the water up to the knes, specially if he be fat, he may goe the daper. Notwithstanding there are some that hold opinion, they ought not to goe so depe, as their stomes touch the water, specially if the horse be young. After Hatch, and the Spiring, it is very good to ride them up and downe in some River, which will exercise their legges, soz the water dreyeth the legges, and restraineth the humors from falling downe, and helpeith them from windgalls: as soone as they come from the water, you must with a little strawe wipe them cleane, soz the dampē of the stable causeth inflammation in the horses legs that be wet. The water (according to Vegetius his minde) would be cleare, and springing, other like it a little running and troubled in a clay ground: soz this water, by reason of the thicknesse and fatnesse, doth better nourish and fadē the horse, then

then the swifte running stremes : yet those horses that are used
to the swifte and cleare rivers, are commonly the strongest, and
best travellers: and therfore it woulde be wel considered how the
horse hath bene accustomed: the colder the waters are, the lesse
they nourish, the daper a horse drinckes, the fatter hee proues:
e therfore some horse-coursers use to wash their horses meuths,
first with water, and after to rub them with salt, to give them an
appetite to their meate and their drinke.

Thus much concerning the Plovne-horse, the Packe-horse
and the Carte-horse: Now for the horse for warre-like seruice,
for the Noblemans padd-horse, for the Goodmans Travelling
horse and other mens horses for pleasure, as Hunting or Run-
ning, they are of greater price, of higher condition, of moze de-
licate nature, and must have a moze curious hand held over
them both in their government and feeding; therfore whosoeuer
is owner of any of these choyce horses, hee must obserue
twise a day, that is, early in the morning by the syng of day,
and at the beginning of the evening, at thre or four a clocke
(according to the season of the yere) to see him well deest ac-
cording to the oder of good horsemanship: That is, after he
hath clesned his stable of all dung and filthinesse, put up his
litter, set things in oder that are oderlesse, put his horse
upon the bridle, and brought cleane water into the stable,
Then to uncloath his horse and to dresse him in this oder, first
curry him over with the Currie-combe beginning at the set-
ting on of the head, and so descending downe to every outward
part of the body and lymbe, the legges onely excepted from the
knees and the Cambells downward; then beate away cleane
the dust which the Currie-combe hath rased, then currie him
all over with the French Brush, beginning with his face and
cheekes, and so descending downe into every other part publike
and private, legges and all, then dust away cleane what the
Brush hath rased, then rubbe all his boode over with your
wet hands, and what your wet rubbe dry againe: then rubbe
him over with a cleane dyie w^t collent loath, after with a cleane
Lymencloth, then rubbe his legs from the knees and Cam-
bells downward very hard with hard w^tthen wisper, after
pycke and cleanse all secret and obscure places, as Heath,
Troll,

Tuell, Chappes, thygges fete, &c. then Combe down his Hane,
 Tayle and soxtop with a wet Hancome, and lastly cloathe
 him up and wispe rounde; then water him and chaffe him a
 little after his water; halfe an houre after give him a
 pottell of Dates and a pinte of spelt Beanes, then a small bottel
 of Hay: After none tubbe the Horse downe with a dye cloath
 turning up his cloathes and chaffe his leggs well with harde
 wispes, then give him a pottell of Dates and Hay if he want
 it. At soure a clocke at evening or soner (according to thesea-
 son of the yere) dresse as in the morning, water and fede. At
 nine a clocke at night, tubbe downe as at the asternone and
 fede in the like manner; give Hay so; all night, put dolvne his
 Lytter and make the Bed soft, obseruing to keepe the Litter as
 forward as you can, for the Horse out of his owne Nature will
 put it downe; and thus doe day by day in his ordinary keeping.
 But if you Travell, then be sure to give him his prouender so
 earlie in the Morning, that hee may stand two houres on the
 Bridell fasting before you take his Backe, and give him the
 double quantitie of prouender that you doe in his rest; in your
 Trauell use moderation the first houre, that the Horse may
 emptie himselfe, then after ryde as you have occasion; In
 travell to light at an hil will be your owne ease, and your horses
 health, for you may both pisse your selfe and inlyze your horse
 to pisse also. Every time you light, looke to your horses Shooes
 both for feare of losse, and least he shold get either Stone,
 Bone, or Payle into them: everie time you Mount into the
 Saddle thrust your hand betwene the Horses backe and the
 Saddle, both before and behinde, so; feare it shold sit dolvne.
 If when you mount or in your Travell your horse shake his
 head or picke one eare forward and clappe the other close
 to his necke, or use other scowlling gestures, then the Saddle
 wounds him at the poyncts and you must take for preven-
 tion; and upon that side which he clappes downe his eare,
 on that side of the Saddle it hurts. You must give your
 Horse water before you come to your Inne, and warme him
 well after it; when you come to your Inne neither wash
 nor walke, but tubbe cleane, cloathes exceeding warme and
 wispe rounde. After halfe an houres standing on the Bridle
 give Hay, but doe not vnbidle so; an hower after, then
 vnbidle

How to
water and
Fede.

Order in
trauell.

Order after
Travell.

bindidle, rubbe his head and legges very hard and well with
hard wispes, then turne up his cloathes and rubbe his bodie
and necke with hard wispes also; before you Sup give him
his prouender, pyke his foote, and stoppe them up with Cowe-
dunge; After Supper, uncloathe and dresse him withall
painefullnesse (as before heyled) then cloathe warme (as be-
fore) then if you finde your horse is extrodinarily dry, warme
him a littell water luke-warme and give it him; then give
him more provender and Hay so all night; call for more
fresh Litter and so let him take his rest. Then whatsoeuer is
amisse either in shoses, saddles or furniture, take such order
that it may be amended against the next morning. And thus
I thinke I have given you satisfaction for these choyce and
principall Hosles; I will now descend and speake of such
Infirmities as by disorder, mischance, evill dyet, corrupt ayre
or such like doe happen unto Hosles, and first I will speake
of inward Sicknesse in generall, under which I will com-
prehend alloursafts and destemperatures, all over-rydings,
Pellowes, staggers, Foundring in the Bodie, or any im-
perfection, that taketh away the cheatesfull countenance of
an Horse and maketh him droope, foriske his meate or use
any other languishment; any of which assayne as you shall
perceive, presently let the Horse blood in the Necke veine,
and in the mouth; then if the sicknesse be not exceeding
Contagious let him rest till the next morning, but if it
worke with any violence upon him, then two houres after
take two god Spynesfull of London-Treakle and dissolve
it in neare a pinte of either Dragon-water, or Cardus-Ben-
edictus-water, and warme it and with an Horne give it
to the Horse; then if hee be able, ride him a little after it,
or otherwise walke him up and downe in some Hammie and
warne place for halfe an houre, then set him up very warme
and let him fast at least two houres more, then give him a
little swete Hay, or a fewe swete ayre Dates: at none
give him a verie swete Pashe of Hault and water, which
if hee refuse to take, then drayne the Water from the
Hault, and presse and squeeze the Hault well, and so give
him the Water with an Horne, and thus you shall dor for
thise

The cure
of Diseases,
Of inward
sicknesse,

I.Cure.

thre dayes together. But in any wise be most carefull that you give no colde water, till hee have that strength of the body that you may ride him forth to water, and that you may chaffe and warme him after he hath drunke; this is a readie, certaine, safe and easie Cure.

Now because the diseases in Horses are as many and as numberlesse as those of Man, & because I neither desire to clog the memory, nor oppresse the judgement, I will reduce and draw these Instncts into as few heads as is possible, yet not so few but I will give a full satisfaction for all; Wherefore I would have you understand that al diseases in horses are either inward or outward; inward as offending the vitall parts, or outward as troubling the Members: the inward sicknesses I also devide into two Branches, that is, If it offendeth the heart or the braine; If it offendeth the heart, they be then the infirmities I last spake of, and so which I have given you already an approoved Cure.

If they offend the Braine, then we call them Apoplexies, Palsies, Colds of all kinis, Teughes wet and drye, Glanders, Mourning of the Hyne, Brokenwinde, Migrins, Dizziness and any thing that is like unto these: and the Cure is to take a pynte of Hacke and halfe a pynt of swet Dyle, and bew them well together, then adde to them a quarter of a pynts of the Syrcoppe of Vinegar, and when all is incorporate well together, warme it on the Coales & so give it to the horse, part at his mouth, but the greatest part at his Posthills; then Ride and chaffe him after it, let him fast two houres, sede as at other times, and let him drinke no colde water but when he may have exercise after it, and be sure to keepe him warme.

a.Cure.

For all manner of Wormes, Belly-ache, Bellibound, Fluxes or the like, take the small hayes which grow in an Horses eares and are cut away when you coulde him, and the small short hayes that grow under his foletoppe, and about his eare Rotes, and myre them with a few Dates and so give them to the horse to eate, and dos thus twice or thrice, and it is a most certaine Cure.

3.Cure.

Now for outward diseases, they are either Naturall or Accidental; If they be Naturall, they either grow from the Generation

Generation o; Wnde from whence the horse is descended, o; else from corruption of wnde o; other unwholesome keeping; If they grove from the Wnde and Generation of the horse, then we call them the Wines, Wlens, Knots, Kirells and Swellings, o; Inflammations about the ^{4. Cure.} throte. For any of which first clip away the hayre bare, then for a day o; two apply unto it most rotten Litter, then after clappe on a thicke plaster of Shoemakers ware, spread upon Allome Leather, & remove it not till the swelling either breake or consume away.

If they procede from corruption of Blood, o; seode, o; any o; ^{5. Cure.} other unwholesome feeding, o; keeping, then wee call them Impostumations, Tyles, Botches, Fistulas, Pele-evil and the like. And the Cure is a thicke plaster of Shoemakers ware (as before shewed) till they are broken, & with Vnguentum Egipiacum (which is to be bought of every Apothecarie, and to lay a plaster of Shoemakers ware over it also; to make the Drifice in the lowest part that the corruption may descend downward, also (if the place be without danger) if you thrust a Noyll of hayre through it, and annoyn the Noyll once o; twice a day with the oyntment last spoken of, it will heale much the sooner.

There be also other diseases which procede from naughtie seode, and we call them Farcies, Scabbs, Haungie, Lepposie, Scratches, Paines, Mules, Pallander, Hellander and all of such like nature; And the Cure is to keepe Arsmatt & Brooklime in old winc two o; thre nights, then boyle it til the hearbs be soft, and then with this water reasonable hot wash any generall Skuerre o; Haungie, and for any particular Boxe apply the hearbe and the byrne hot unto it, and it will kill the evill humor, and heale the griefe, onely you must not forget to take good stroe of blood from the Boze at the beginning of the disease.

Now if his diseases procede from accidental causes, as from ^{7. Cure.} Wounds, Wulnes, Straines, Galls, Hurts in the Eyes, Excrestions, o; Broken Bones, then you shall to every one of these, take those severall medicines which follow, as first, if they haue Wounds in what soeuer part taken o; received, you shall if it be great and in a fleshie part, o; any other part where convenient, by you may, first stich it up with a Neede and vesse silke, then layne

laynte it with Terpentine, Ware, & clarified Hogges-grease of each like quantitie, and halfe so much Werdigrease as any one of the other simples being molten all well together, and apply this Salve (if the wound be great) warme, if otherwise apply it colde being spread upon hards.

8. Cure.

If they bee bruisles whether gotten by stroake, naughtie Saddles, or other Rushes, from whence procedeth many times old putrefied and most Cankerous Ulcers, you shall first if the Tumour be onely swelled, and not broken nor likely to breake, bathe it divers times in the day with cold water; but if you find by the hardnes and sozenesse, that there is Inflammation and it will breake, then cut away the hayre, and apply either rotten Litter or a plaster of Shooemakers-ware, and when you finde the Tumour soft, lanch it, and laynte it with Rose and Terpentine molten together: but if it be an open old Cankerous Ulcer, then take Masticke, Cloves, greene Cupporas and Brimstone, of each a like quantitie, of Withe double so much as of any one of the other, beate all to a fine powder, then burne it on a chafing-dish and Coales, but let it not flame, then as the smoake ariseth, take a good handfull of Lint or Flare hards or Toole, & hould it over the smoake, so that it may receive all the perfume thereof into it, then when it hath received all, put it into a very cloße Boxe, and when you have occasion to use it, first wash the soze with warme waine, then drye it, & lastly lay on some of this lynt or Toole, and thus doe twice a day, and it is a certaine Cure.

9. Cure.

If they be Straynes either of Joynts or Synes, in what part or Member soever it be, old or new, take Boares-grease, Bolearmoniacke, Blacke soape and Herue-oyle, of each a like quantitie, boyle them well together, and then apply it hot to the griefe, rubbing and chaffing it in exceedingly, and also heating it in very well, either with an hot Wickbat or hot fire shovell, or an hot barre of Iron, and thus doe once a day, and it will not onely cure the Straine but will keepe the member from growing soule, knotted or gourded, and will also take away all swellings or paines of the Limbes whatsoeuer.

10. Cure.

If they be Galls or Chakyngs off of the Skynne, of what kinde or nature soever they be, whether in the Backe, Lymbes

At any other outward part of the body, you shall take old Wine and salt made warme and therewith wash the Gall. Then stroke or pounce upon it the powder of unsteak lime, or the powder of Honey and Lyme, made in this maner: Take of Honey halfe a pinte, & with the purest powder of unsteak Lyme, worke it into a stiffe past; then upon a Tyle, stone over the fire Bake it as harde as may be, then beate it into fine dust, and so kepe it in a Bladder o; Bore, and cast this upon the Gall, and it is a most certaine and approued Cure.

If they be any harts in the eyes, as Hcoaks, Inflammations, Pinne, Ullebbe, Canker, Spone-rie or any other mischiese whatsoever, you shall take a pinte of Snow water and mire with it two or thre drames of white Coppozas, and therewithall wash the eye Morning and evening, and it is a certaine Cure.

If they be Excessions of Bones, as Splents, Spabens, Cubes; Ringbones, Nodes or such like, in what part o; mem-
ber soever they be, you shall then take the Roots of Clicampane well clepsted, and lap it up in a Wokone-paper, then wet it and rost it (in hot glowering Cynders) as you would rost a Marden, till it be exceeding soft: then taking it out and opening it, even as hot as the horse can suffer it (for you must not seale) after you have rubbed and chafed the Excession, clay this ther-
unto and binde it on harde, and thus doe divers dayes till you see the Excession is consumed.

If they be broken Bones, or Bones out of Joynte, you shall
after you haue placed them in their due and proper place, first
anoint them with the oyle of Swallowes, or with Peare-grease
booye Ulacie, and then clap about them this plaster o; Cerrot:
Take of pitch a quarter of a pound, & as much Virgin Ware,
of Rose halfe a pound, of the juice of Hop halfe an ounce, of
Galbanum halfe an ounce ; of Hirthe secondarie halfe a pound,
of Bellum Arabitum halfe an ounce, of Deares-Suet halfe a
pound, of Populeon halfe an ounce ; of the drops of Stozar halfe
an ounce ; Boyle all these together in an earthen pot, and after
it is cold, take of Witumen halfe a pound, of Amoniake an
ounce and an halfe, and of Coltsas as much: Beate these into
the powder, and then incorporate them with the other, and boyle
them

The third Booke.

them all oþer againe very well; which doome, þence the whole mixture into cold water, and then Mold it into severall bigge Mollies plasterwise, after spread this plaster upon leather, and ſcald it ſall about the offendid Bones, then with ſoft and flat ſplints of Willow, ſo ſplint the member as it may not move, and ſo let it reſt fullie out twentie dayes etc you dyſle it again; And in any caſe ſo holing the horſe that he may not be any meaſs (during that time) put his member to the ground, which a little diligēnce and paine will eaſily doe.

14. Cure.

If your horſe have any infirmitie in his bones, as Quilter, bone, Oþerreach, Prick, Croone, ſcabbe, Rotten ſcrub, or any ſuch vilerous diſease, you shall firſt ſearch it and lay it open, then take young nettles and chop them ſmall and mixe them with Soape and ſalt, till you haue brought them to a ſtiff value, then washing the ſore firſt with vayne and ſalt warme, binde on this value, & let it ly ſtill ſoure and twentie houres, and thus doe (if the ſore be great) ſo thre or fource dayes together, then having drawne out all the humour (as this value wil quickly doe) then take a ſpoonfull or two of Crayne oyle, and as much Ceruie or white lead as will bring it to a thick value, booke and mixe them ſet together, then ſpread it upon the ſore morning and evening till it be iþole, which will be reſeted ſooneinly, ſo nothing buþ ages up ſommer, nor is more kindly and naturall for the ſetting of a new horſe then this.

15. Cure.

But if the horſe be foundered, frettized or ill heated in his ſette, then you shall firſt pare him as thynne as may be, ſo that you may diſcern the quicks all oþer, then let him blow at the Toes, and take great ſage of bloud from him, but in any caſe cut not the veine in ſummer. After you haue ſanctid the bleeding by clapping Toes and Tallow upon the veine, then ſacke on hollow ſhoes; and ſtop them full of Hogs-grease and Brane ſpoiled to a Pultus, even ſo boylng hot as may be, and renew it not aboue twice in ſeven dayes, and it will bring his ſette to their full perfeſion againe, without any great loſte or troublē.

16. Cure.

If your horſe haue either broken hoþes, or brickett hoþes ſo if his hoþes be weake, tender & imperfect, or if he traþe nearely and not bouldy, but triþs & ſtumblis upon every ſtone, take of Garliche heade ſeven ounces, of Hearche-of-grace three handfulls

full of Allions beaten to powder: seuen ounces, of Marcoines, greene also two pound, and a great handfull of Rices: boyle them boyle and mingle them all together, and with this bath fayre the horses fute, and also anognt the Cabinetts and the hales, and it will haue an hard, tough and strong hore.

As for the common Infirmities in an horses paine parts, which are Swellings, Inflammations, Incorching and such like you shall but anely brime your Horsse in calme water morning and evening, and it is a present helpe; This also cureth Stiffeling in the hynder leggs, and helpeth many hidden strayneis and dislocations, for whiche ordinary Farriers cannot gibe any account. Whys you see these fewe medicines will cure any infirmite in an horse, which any shallow memoxie may carrie without burthen, therefore he that refuseth the trouble, it shills not though he be punyght with a lame Jake. But I feare I have helpe you too long with the horse, I will now proceed and treat of the Ox and Oxe;

Oxes are commonly kept, yet not to be little set by, because Acta of their sumptuous commodities, and the harmesse of their feeding; for this poore beast contenteth himselfe with what meat so ever you give him, Chistles, Wypers, Stalkes, Chaffe, (whereof every Country hath Rose) is good meat with him: besides he may well abide the ill looking too of a negligent keper, and able to sustaine boyles, labour, hunger and thirst, being seldom or never sick: and therfore of all other Cattell longest endureth: for being a beast nothing chargeable, her serueth for a number of necessarie uses: in carrying of burthenes, bee is comparable to the Horsse, he draweth the Cart (so the load be not unreasonable) for grinding in the Mill bee passeth all others: therfore in the Country the Ox is most needfull for carrying of things to the Market, and Coyns to the Mill. In Egypt & Barbary (where the ground is very light) they have also their use in plowing: and the fine Ladies of the Country bee ride upon Oxes richly furnished: yea, they be very apt to be taught, so as atthis in Alcayre, you shall haue them daunce very manerly, and keepe meauer with their spoultian. Varro maketh mention of two so to: one wilde, wherof in Phrygia & Lycania there are great Rose: the wilde Oxes that are tamed,

are

are passing good, specially for brude, & they are easily broken: the other is tame, of which I mean to speake. The best are brought out of Arcadia, (although Varro, somes to commend the brude of Italy for godnesse.) He that will have a brude of Asses, must have the Mare and Female both of reasonable age, large body, ed, sound, and of a god kinde: the Mare must be at the least thre yere old: for from thre, till they be ten, they be fit for breeding: they bring forth their Colts sometimes at two yeres & a halfe, but thre yeres is the best age: the Female goeth as long with her burden as the Mare, and dischargeth in all respects as the both: but she will not very well retaine, except shee be forced immediately after the horsing to runne about: she seldom bringeth forth two. When she foaleth, she gets her into some darke place, and keepest her selfe from being stene. They will beare all their life time, which (as Aristotle saith) is thirtie yers: they are put to the horse a little before the tenth of June, and beare every other yere: they bring forth their Foale at the twelve moneth. While they be with Foale, they must not be greatly laboured, for hazarding their Foale: the Mare must never be idle, for he is as letcherous as the Devil, & by rest will haue naught. The Colt is suffered to run with the Mare the first yere, and the next is gently tyed up with her, only in the night times: the third yere they are broken, according to their use. The Dam doth wonderfully love her young, so much, as she will not sticke to come thorow the fire to it: but the water shee dares in no wise come nare, no, not touch it with her scote, neither will she drinke in any strange water, but where she is used to be wafted, and so as she may goe and stand dry scote. They delight to be lodged in wide rooms, and are troubled with fearefull dreames in their sleepes, whereat they so paine with their legs that if they lye nare any hard thing, they hurt their feete: in drinking, they scarcely touch the water with their lippes, (as it is thought) for feare of wetting their godly eates, whose shadowes they see in their drinking: no beast can worse aby with cold then this. If your Asses halt at any time, you shall thus remedie them, wash all the soote with warme water, and afterward make them cleane with a sharpe knife, which when you have done, take old chamber lye, as hot as may be, and melt there,

therin Goates suet : or if you have not that, Oxe fallow, and answere all the set till they be whole.

Also of the Hare, and the wilde Asse, being broken, are bred Moiles. Spoules that run passing swifly, & are wondershull hard hored, but rugged of their body, & mischievous stomached, yet easie to be handled. the spoules so brede, must not be under fourte yeres: nor above ten: they are foaled in the twelveth moneth, as Horses & Asses are, as Aristotle saith: but Columelia saith, their foaling time is not before the thirteenth moneth. The female conceaveth (as experiance teacheþ) assuredly after the seventh day: the Spale doth neuer better holde, then when he is most tyed. She that conceaveth not before she hath cast her colts tæth, is taken to be barren, as she likewise that takes not at the first hōsing. Those that are gotten betwixt an Horse and an Ass in olde time, were c.alled Heyards, and such as were brought forth betwixt an Ass and a Hare, they called Moiles. The Moiles themselves (they say) doe never engender: and if at any time they did, it was taken for monstrous, accounting the cause of their barrennes, the contrarietie of their kundes: which matter a long time troubled both Aristotle, and the rest of the Philosophers. Though Aristotle hath otherwhere written, that Moiles do both i. gender, & bring forth: and with him agrereth Theophrastus, affirming, that in Capadocia they do commonly bring forth, and engender of themselves. The like doth Vero, and before him Dionisius, and Magus affirme, that the breeding of Moiles in the Countries of Atticke, is neither monstrous, nor geazon, but as common as our bræde of Horses: but the Moile is both fayrer, and better stomached, that is begotten of an Ass and a Spale. The stallion that you meane to have so, your race of spoules, must be as fayre as you can get, having only this regard that he be large of body, bigge necked, broad, and strong ribbed, large, and brawne breasted, his thighes full of sinewes, and the legges well knit, of colour blacke and spotted: for Asses (though they be commonly dunne) yet that colour agrereth not well with a Moile: some say, that what colour you would have your Moile to be, with that coloured cloake you must cover your Ass. The Ass so proportioned (as I have delivered) that you meane to appoint for your stallion, you must straight wayes

take from his damme, & put him to some Mare that hath a Colt sucking of her: you shall easily deceive the Mare, by setting her in a backe place, removing her own Colt from her, and putting to her instead thereof the Asses Colt, which she will nurse as her owne. Afterwards, when the Mare hath bene used to it a ten dayes, shoo will continually after that time give it sucke. The Ass being in this order brought up, wil better acquaint himself with the Spate: sometimes though he be suckled only with his own damme, being brought up when he is yong amongst Mares will wel enough keep company with them (as Columella saith:) but our Asses are of themselves desirous enough of the Mares, that they need not to be trained to the matter: so it is a wonderfull coltish beast, & unreasonably weaponed. He must not be lesse then thre yeres old when he covereth your Mares, which must be in the spryng time, when you may wel saede him with grasse and good stroe of Dates, and Barly: neither must you put him to a young Mare, soz if she have not bin horsed before, she wil so beat her master, that she will make him like the worse as long as he liveth: for remedy whereof, you must at the first put to the Mare a wilder Ass, that may war her before, but not suffered to horse her, & when you perceive that she is horsing, away with the raskall, & put to your stallion. A place fit soz this purpose, the Country people (as Columella saith) were wont to have, which they called a *franne*, or a *Brake*, with two tailes on both sides, and a little distance betwene, that the Mare cannot scrye, nor turne from the Hoise, the lower part enclosed, and the Mare standing low, so the Ass may the better leape her, having the upper ground for his helps, which when she hath conceived, and at the twelue moneths end brought forth, the yere after she must be suffered to run emptie, that she may the better bring up her colt. The she Woile (being a twelue moneth old) must be taken from the Damme, & let run upon Mountaines, or wilde places, for the hardening of her hooches, & the better enduring of labour, so the male is the better for burdon, and the female the quicker & livelier: both the kinds doe travell well, and till the ground, if the plowman be not unreasonable, or the ground so stiffe, as it requireth a draught of Oren, or Rose. They will leave striking and sticking, if you use to give them Wine (as Plinie

Plinie reporteth,) who likewise wryteth, that a Hoile will live
 sone score yeres. Hert the Hoile I place the Camell which
 is chiesely used in the East parts, which some suppose to be the
 serviceablest cattell for man that is, & as it lyete thereunto onely
 ly framed, for he is bumbass upon the backe for bearing of bur-
 dens. Also, he hath sone knaes, whereas the Horse, the Asse, and
 such others, have but two: for his hinder legs bow forwards as
 a mans knee doth, wherewith he kneleth to receive his burden.
 There are two kindest of them, the Bactrian, & the Arabian: the
 Bactrian have two bunches upon their backes, and the Arabian
 but one, and the other on their brest to leane upon, both sortes of
 them lacke their tæth above, as the bullocke doth: they all serue
 in those Countries for burden, and to carry men in the warres:
 they are as swift as horses, but some a great deale moare then o-
 thers: neither wil they breake their pice, nor carry moare burdens
 then they are tyed to: they beare a naturall hatt to the horse
 and can forbeare drinke for sone daies: he drinke when he
 may, both for that is palt, and to come, troublisg the water
 before with his fot, otherwise he delighteth not in it: he is
 leide beside his pasture, and such things as he gets in the
 wood, with Dates or Walry, and Soalt: he engendreth back-
 ward as the Elephants, Tygars, Lyons, Couines, and such
 other, whose instruments grow backward: when they meane
 to goe to cut, they seke the secretest and desertest places that
 may be: neither may a man at any time come neare them,
 without great danger. They goe with young a fvelue
 moneth, and are moare for bæde at thys yeres old, and after a
 yere they conceave againe, they beare but one at once, as Ele-
 phants, and other great beast doe: they gibe milke till they be
 great. Againe, (as Aristotle saith) Dydimus in his bookes of hus-
 bandry wryteth, that the Camell hath a regard to his blod, as
 the Horse hath, & lieth neither with mother, nor sister. And the
 female Camel of Bactria, stepping upo the Mountaines amongst
 the wilde Boares, is oftentimes beamed of the Boare, & con-
 ceaveth. Of the Boare and the She Camell, is engendred the
 Camell with two lympes upon the backe, as the Hoole is of
 the Horse, and the Mare, and in other things resembleth his sire,
 as in bristled heares, strength, and not fainting in the myze but

going lustily through, and in carrying double so much as other Camels, as the same author saith. The females of them are spaire, to serue the better for the warres : they liue (as Aristotle saith) fiftie yeres : others say a hundred yeres, and are subiect to madnesse, (as Plinius saith) there are a kinde of them called Camell opards, that have the resemblance of two divers beastes, th. hynnes and hinder legges like an Ore, his foreleggs and his head like the Camell, the necke like a Hozle, being flecked white and red. Strabo saith, he is coloured like a fallow Deare, Straight necked, and his like an Ostridge, his head some thing higher then a Camels. But now leauing these I will speake of the Ore and his kinde.

Of the Oxen.

By the worshynesse of this beast many great things received their names of them : for of the number beauty, and fertilitie of Haisers, did Italy (as they say) first take his name, because Hercules pursued the nible Wyl, called Italus. This is the chiese companion of me in his labours, and the trusty servant of the Goddesses : in many great things, for the roialty of the Ore, they derived their names from the Ore, as in calling also the Grapre Bull a man : in fine, Jupiter himselfe thought god to convert into this shape his sweete darling Europa. Who euer, of a rotten Hare are engendred the sweete Bas. Varro makes foure degrees in their age: the first of Calves, the second of Pierlings, the third Heares, the fourth Oren. The Heeres : in the first, the Bul-calle, & the Cow-calle: the second, the Hayfarr, & the Heare: in the third & fourth, the Bul, & the Cowe the barrant Cowe he calleth Taurin, the melch Cowe Hordom, from whence came his feasts called Hordica festa, because the melch-hine were then sacrificed. The goodnessse of this beast is divers according to the diversitie of the Country, the best were counted in the old time to be of the bronde of Albania, Campania, & Toscan : at this day we take the best kinde to be in Hungary, Burgundy, Frisia land, Denmark, and in England. Of Bullocks, some are for the draught, some for the staine, & some for the paile : to what purpose soever they serue, whether it be for labour, for milking, for feeding, it is best alwaies to chose such as are young, of lusty age, rather then those that are old & barraigne: yea of covenant in the old time (as Varro saith) in selling of Bullocks, were these: do you want these

these Bullocks, or fatenes, that you sell to be sound, of a sound Heard, & without fault: The Butchers that buy for slaughter, such as buy for sacrifices, use no word of warrantise: & though some Bullocks are chosen by their strength, some by the greatness of their body, yet the best commonly have these properties: large, well knit, and sound limbes, a long, a large, and a deepe hded body, white horned, broad sozeheaded, great eyed & blacke, his eares rough and hairy, his iawes to be large and wide, his lips blackish, his necke well brauned and thicke, his dewlappe large, hanging downe from his necke to his knees, his shoulders broad, his hide not hard or stubborne in feeling, his belly deepe, his legs well set, full of sinewes, and straight, rather short then long, the better to sustaine the weight of his bodie, his knees straight and great, his fete one farr from the other, not broad, nor turning in, but easily spreading, the haire of all his body thicke and short, his tayle long, and big hazzed. Palladius thinketh the best time for buying of draught Oren, to be in March, when being bare, they cannot easily hide their faults, by the fraude of the Seller, nor by reason of their weakenesse be too stubborne to be handled. It is best to buy them of your neighbour, lest the change of ayre and soyle hurt them: for the Bullocke that is bought up nere home, is better then the stranger, because he is neither troubled with change of ayre, water, nor pasture: if you cannot have them nere you, buy them from some like Country, or rather from a harder: and be well assured that you buy them even matched, less in their labour the stronger people the weaker. Looke besides that they be gentle, shiffull in their labour, scarcefull of the goade, and the drier, not dreading any water or bridge: great fators, but softly, and not over-hastie, for such do best digest their meate. In choying of Bullen w^t Nine, the very like signes are to be required, that the Bull differeth from the Oren, in that he hath a more stowning and fierce looke, shorter bones, greater, and thicker necks, so big as it seemes the greatest part of his body, his belly something gaunter, and master for Bulling of Nine. The Bull, before he be suffered to goe with the Nine, must be well fed with grass, chasse, or hay, & kept severally by himselfe, [neither must he goe to the Cowe, till the tenth of June. Varro would not suffer him

before the rising of the Lune: but Aristotle would have him all the reboozing time, to go in pasture with the Nine. The Cowe likewise would be high of stature, and long booted, having great vdders, broad forehead, faire hornes, and smooth, & all other tokenes almost that is required in the Bull, specially to be young: soz when they passe twelue yeres old, they are not good for hwoes, but they live many times faire longer if their pasture be good, and they kept from diseases. The old Cowe giveth more milke then the yong, according to the Country peoples proverbe, old Nine more milke, yong Hennes more egges. Againe, vnder thre yeres old you may not suffer them to goe to Bull: if they chance to be with Calfe before, you must put the Calfe from them, and milke them soz three dayes after, least their vdders be soze, afterwards forbeare milking. Plinic witteth, that at a yere olde they be fruitfull, but the bæde will be little, as it happeneth in all too timely engendrings. You must every yere in these beasts (as in all other) sort your stocke, that the old that be barcaine, or unmeete for breeding, may be put away, sold, or removed to the plow: so when they be barcaine (as Columella saith) they will labour as well as Oxen, by reason they are drier up, but we use commonly to sat them: their age is knowne by the knots and circles of their hornes, which Plinic marketh likewise in Goates. The time for going to Bull, some take to be best in the midk of the Spring: Palladius would have it in July, soz so in the ninth moneth she shall calve, so long she goeth with Calfe (as the common people say) a Cowe and a Quean hath both one time. In many places they desire to have their Cowes goe to Bull a thirtie or forty daies after the tenth of June, that they may calve in March, or April: that they shold haue much milke, so oder the matter, as their Nine go to Bull from the sayng to Winter, where by they alwaies milke somme at once bulling the conceibeth, if the chance to faile, she goeth to Bull againe within twenty dayes after: some say, if so be the Bull come downe on the left side of the Cowe, it will be a Cow-calf, if on the right side a Bull-calf. The Charkes affirme, that if you will haue a Bull-calf, you must knit the right stome of the Bull, and soz a Cow-calf the left: Varro saith, that if you put the Cow to the Bull immediately after gelving, she conceibeth, Columella affirmeth

meth thinke nine to be enough for one Bull. I thinke he will
well enough serue twenty nine, if he be such a Bull as I descri-
be: if you have god stroe of pasture, you may let them go to Bul-
every pere, but you must beware your Bull be not too fat, that
will hinder their being with Calfe. The Cowe shoud when she
is redaxing, have but shrot pasture, and the Bull his belly full &
so shall neither she be too fat, nor he unlyfy. If the Cowe will
not take the Bull, you must stampe sea Onions in water, and
rub her under the taile with it: if the Bull be not lusty enough
about his busynesse, take the pezzell of a Satagge, burne it, and
make it in powder, and with a little wine and the powder, bath
his stones, and his pezzell withall, which will serue for the like
purpose in all other beasts (as Quicquidian saith.) A Bull ought not
to leap the Cow above twise in a day as some think, but we finde
by experiance, that he may oftner. In some places they have com-
mon Bulles, a common Boares to every Towne: A Bull will
waxe furious at the sight of any red thing, as the Elephant & the
Lyon, which can in no wise abide the sight of any white thing. A
Cowle will give sucke to a Strange Calfe, but let not the calnes
lye with them in the night, for feare of over-laying them. Some
weare them at the first & slacketh them with Milke, or Whay,
having a little Branne it it, or Flou're, wherewith they dryng
them up, till they be able to feede. Whether you meane to castrate
them for herte labour, or feeding, you must let them want no
stroe of god pasture: for though they be of never so great a
herte, yet if their pasture be scantie, they will never come to
their full growthe: for pasture makes the boast (as the Coun-
try people say.) Magre, and the old Husbandes, would have
you to gelde them while they be very young, which other wise
likewise obserue in cutting of them: and in the Spying, as
at the fall of the leafs, when they be thre moneths olde, or
there about, wch use to gelde the Bull Calnes, and spay the
Cowe Calnes, sowing up the wound, and annotting it with
fresh Butter. Columella would not have them cut, but their
stones broken by little & little with an instrument, which kind
of gelding he best liketh, because in the little young ones, it is
done without bleeding: for when they be something growne up,
it is better to cut them at two yeres olde, then at a yere olde,

which must be done in the spring, or at the fall of the leane, the stones being in the wane: you must tye up the Calse to a frame, & before you cut him, you must fasten about the sinewes, whereby the stones hang, a couple of small sticks like a paire of songes, and taking hold therewith, cut away the stones, so as a little of the upper parts of them may remaine with the foresaid sinewes: for by this meanes you shall not hazard the beast by overmuch bleeding, neither is his stomacke quite taken away, but hath something of the fatter remaining, and yet loseth his abilitie of ingendring. Notwithstanding, if you suffer him immediately upon his new cutting to goe to the Cow, it is certaine he may get a Calse, but let him not so doe, for feare of bleeding to death. The wound must be annointed with the Ashes of Hines, & Lytharge, and he must not be suffered the first day to drinke, but nourished with a little meate: thre dayes after he must be dycted, according to his feblenesse, with græne bowes and swete grasse cut for him, and looked to, that he drinke not too much: and if you will, you may annoignt the sore for thre dayes with Tarte, and a little Ashes, and Dyle, to heale him the sooner, and to keepe the place stony shies. You must use them while they be yet young to suffer to be handled, and stroked, and tyed up to the Hanger, that when they shall come to be broken, they may be handled with more ease, and lesse danger: but Columella forbids you to meddle with the breaking, or labouring of them, before thre yere old, and after five: for the one is too stone, and the other too late. Those that you have taken up wilde, and be well framed, and proportioned, according to my patterne, you shall handle and breake in this sort: First of all, see that you have a large crone, wher the breaker may easly goe up and downe, and out at his pleasure, without any danger. Before the stable you must have a faire field, that the staires may have libertie enough, and not be feared, or halterred with trees or bulkes. In the stable, you must have certaine stallis or bordes, yoke-wise set up, a seuen foote from the ground, to which the staires may be tyed: this done, chuse you a sayre day for the purpose, and taking them up byng them into the stable: and if they be unreasonable, wilde, and curse, let them stand tyed a day and a night without any meate,

The
breas
king of
yong cattell

wreake, so come them withall : afterwards let him that kepeþ them offer them a little meat, hot & coldways, or beside, but no fire, coing them all the while, and speaking gently to them, stroking their backes, and their moseles, and sprinkling them with a little sweet wine, taking god heede, that they strike him neither with head, nor with herte ; for if he once get that tricke, he will never leave it. Thus being a little acquainted with him, you shall rubbe his mouth with salt, and let downe into his throat certayne lumpes of salt tallow, and poloxing after a quart of god wine, which will make him in thys dayes as god a felow as you would wish hym to be. Some use to yoke them together, and let them draw some light thing, or plow in a light plowed ground, that their labours hurt not their neckes.

The readier way of breaking them, is to yoke them with an old Oxe, that may easily instrue them : if he happen to lye downe in the furrow, do neither beat him, nor scare him, but binde his late together, and let him lye, that he may neither sturre, nor stirre : which being well punished with hunger, and thirst, will teach him to leave that sullen tricke. The feeding of this kinde of Cattell is divers, according to the diuerositie of Countries : and the purpos for which you kepe them, for those which you kepe and call weanlings or veatings, and are of one, two or three yeares of age, and are onely to maintaine and uphold the store, are to be kept upon your hardest grounds and earthes that yeld the leaſt profit, whether they be Woods, Parks or Pastures inclosed, or Heathes, Moors, Dovunes and other wild uninclosed places, both Winter and Sommer, till they come either to be broken to the plow, to be joyned to the Peale, or to be sold in the market. But if such grounds wil not maintaine them all Winter, then you shall sustaine and maintaine them at the stand Wacks or Hecks both with white straw and peisstraw, and besides the reliefe to the Cattell it is an excellent way for the breeding of Peanure where it is wanting.

Sow for your draught Oren, your milch hine & those which yeld you any daily profit, they would be kept in grounds of somwhat better Fertilitie where they may have a daper and a fuller hit, whether it be pasture inclosed, or Combris kept and preserved, or Leathering grasse where they may sit and at your pleasure

A better
way.

Feeding of
the store
Cattell.

Feeding of
the draught
Cattell.

pleasure he consider any of which will sufficiently serve for the
summers feaste. But in the extremitie of Winter you must
haue your dwyngt Cattell and seede them when they labour ei-
ther with cleane Hay, or at the wrost with blend sodder which
is Hay & straw mixt together, and when they lye Idle straw
it selfe is sufficient. So your milche kine, thos which give
milke would likewise be housid and fed with Hay (if you live
in a bleake Champion Countrey where is scarcitie both of
Greasse and shelter; but if you liue where there is warme shiel-
ter and strore of winter fogge, there your kine may live a-
broad all the Winter, and onely be relieved in lyng weather
and daunger shewes with a little Hay. As for those kine which
are drye and yeld no profit, they will shift well enough either a-
broad or at the stand Racks with straw.

Now for those Cattell which you intend to seede and make
of Farting fat either for poulse or your private provision, those must be seede
upon your best and most fertillst grounds, and in the sowing
of these grounds there are divers things to be observed, as first
that they be well fenced; then well stored of water that is
sweet, and wholesome; for howsoeuer the Ancients hould opinion
that these Cattell delight in troubled waters, yet experiance
shewes us, that putrefied waters haue mortall diseases: then
that they lye free from Inundations, then that those pastures
which you lay and give rest unto from the beginning of November,
you may graze at Candlemasse following, with houlding
Beasts or Beasts beginning to sea, but with your fat Cattell
not till our Lassis day; Those pastures which you lay or give
rest to at Candlemasse, you may Graze at Hay following, those
which you give rest to at Hay you may Graze at Midsummer,
those you lay at Midsummer you may Graze at Lammas, and
those you lay at Lammas you may Graze in October & gene-
rally all the Winter following: Lastly you shall obserue, that
those pastures which lye most in danger of water or any other
casualtie, be first eaten, least by two long delaying an unseason-
able time come, and so you be preuented both of your hope and
profit.

Now in the sowing of your pasture Groundes there are also
many things to be observed, as first in the feeding of your fat
Cattell

Cattell you must by all meaues provide that they habe ful bitt, which is to say, length of Grasse, for Cattell whose tonges are the principall gatherers up of their food, neither can no man will bite neare the ground, unlesse extreme hunger compell them, & then they take little ioy in their food. Next you shal sorte (as any fit occasion will give you leaue) remoue and shifte them into fresh groundes, and not expect that they shold eate your Groundes downe to the bottome, but onely as it were stumme and take the uppermost and choicer part thereof, and so they will feare both swifly and throughtly and for that Grasse which they shall leave behinde them, you shall eate it up after them with your labouring Cattell, and lastly with your Sheape. It is very good also amongst your fat Beastes ever to have some few leane Horses, for your fat Beastes take the delight to feede with them, & sometimes to bite after them, there being as it were a kinde, of sympathie or liking of each others Beastes. After your Grasse is fully knyt & hath received his whole strengthe, which will be at Midsummer, then you may suffer your fat Beast to eate a little nearer unto the ground, til after Lammes, because there is an extraordinarie sweetnes therein. These few obseruations well kept, there is no doubt but your Cattell will feede wel to your own contentment. Then when you see they are suffitiently fed according to the aime of your purpose, whether it be for the use of your houshold or the use of the Market, you shall forthwith imploy them accordingly, for it is both the losse of time and Money not to put them off by daile, or otherwise assone as they are come to the ende of your desire. For these rich groundes will sometimes make two returnes in the yeare, sometimes three, which is a great profit, and I have heard sometimes of four, but it is very rare, and the Cattell so trauayled must be very well strichen with feed before they be put unto feeding. But if your Ground will returne lean Beastes fairely through the yeare, it is Commodite sufficient.

Now because it is not convenient to say weill my good Cattell when they are fitt, until you haue the Middes, I will to know a fitt kindes the same, you shal obserue these few rules following. First when you haue your Beast in the greatefull shape and Composure of his body, then will faine and Dolefull, each member being comely

How to

know a fitt

Beast.

comely and each Bone covered in such sort as a perfect shape requireth, as no eye is so stupid as cannot tell when a beast liveth well or ill favouredly, you shall then guesse the beast to be well fed, especially when you see his huckell-bones round & not sharpe, his Ribbs smooth and not rough, his flanks full, his Pache thicke and his Cod round; this when you shall perceive, then you shall handle him, and groping him upon the meather, most Ribbs, if you feele the Skinne losse and the substance lost under your hand, you may be well assured that the Beast is, soundly fed outwardly, that is, upon the Bones; you shall then lay your hands upon his round huckell-bones, and if that feele under your hand softe, round & plump, you shall be assured that the Beast is well fed both outwardly and inwardly, that is both in flesh and Mallowe: then you shall handle him at the setting on of his Tayle, and if that handle big, thicke, full and soft, it is a true signe that the Beast is very well fed outwardly; then handle his Pach-bones which are on both sides the setting on of his Tayle, and if they feele soft and loose, it is a signe that he is well fed, both outwardly and inwardly; Lastly you shall handle his Codd and Pavell, if it be an Oxe, and the Pavell smelly if it be a Cowe, and if they handle, thicke, round, soft, great and plump, it is a most assured signe that the Beast is verie well Tallowed within. And thus when any of these parts or Members shall handle in contrarie manner, you shall then Judge of the contrarie effects*.

Your Drestalls must stand dry: and be well stowzed, either with stone, gravell, or sand: the stone will suffer no water to abide upon it, the other will sone drinke it up, and dry it: both sorts must be layed slope, that the water may come away for rotting the groundfels, and marring their houses. Let them open toward the South, so shall they be witer, and the warmer: notwithstanding, let your windowes open North and East, which being shut in winter, and open in Sommer, may give a healthfull aire. In fine, as neare as can be let the houses be neither too hot, nor too colde, and as dry as may be.

The foynts should be eight foote wide, that they may have roome enough to lye in, that the hinde great with Calfe hurt not one the other, nor the stronger Oxe lye upon the weaker; and that

that there may be come for their keepers to come about them, and for goaking them.

Moreover, it is to no purpose to feede them wel, except you also take to the keeping of them in health, and sound; and therefore whether they be in houle, or abroad, you must alwaies have a speciall regard unto them, and to keepe them in the night, specially if there be any Nine amongst them with Calfe. And though it be neyeful at all times to overhaue them, both morning and euening, yet most neyeful is it of all other times, to see to them in the spring, when you first put them to pasture: for at that time, by reason of their change of diet, both Cren Nine, and Hayfats, are most in danger of sicknesse: in winter againe to take to them, that they be not, for sparing of charges, kept so pale, as they be utterly spoiled. And therfore you must spare no litter, specially when they come from labour, to cubbe them, and dry them, stroking them with your hands, and raising the hide from the flesh, which will do them great good. In coming from wood, or out of the pasture, you must wash their feet well with water, before you bring them into the houle, that the durt & filth cleaving to them, breed no diseases, nor soften their huses. Beware of too much cold, or heate, for too much of either, illmeth them with diseases: You must take heed they be not chaced, nor chased up, & do a meane specially in hot weather, for that bringeth them in a Fever, or causeth them to have a flire: Take heed also that there come neither Swine nor Poultrie nere their stallers, for both of them with their dunging poisoneth the beast. The dunging of a sick Swine doth breed the Pestilence, or Murrain amongst Cattell. You must away with all manner of Cartions, & burying them wel for infecting your Cattell. If so be the Murraine chance to come amongst them, you must presently change the ayre, & sever your Cattell sacer to sacer in divers pastures, keeping the sound from the sicke, that they be not infected, nor suffering them either to inde together, or drye together.

The Pestilence or Murraine, is a common name: but there are divers kindes of it: in some Murraines the cattell dwelle, and runne both at the nose and mouth: in others againe they be dry, and fall away more and more: sometimes it comes in the joints, and causeth them to halt before or behinde: sometime in

The Murraine and his divers kindes.

their kidneyes, and appeareth by the weaknesse of their hinder parts, wherin they seme to have great paine in their loynes. Another kinde there is, that riseth like a Farcine, with pimples over all the body, now appearing, and presently vanishing, and comming out in a new place. Another soote, betwixt the hide and the flesh, wherein the humour sweateth out in divers parts of the body. Sometime it is like a leprosie, when all the skin is full of little pimples, and sometime a kinde of madnesse, wherein they neither heare, nor see so well as they were wont, though they looke faire and fat, and lustie enough. Every one of these kindes, are contagious and infective: and therefore as soone as you perceive them infected, you must presently put them asunder, for infecting the whole flocke, lest you impute that to the wrath of God (as many sole doe) which happeneth through your owne beastlinesse, and negligence. The common remedy (as Columella saith) is the roote of Angellica, and Sea Thistle mingled with Fenell siede, and with new boyled wine, Wheat flowre, and hot water to be sprinckled upon them. The common people, when they perceiue either their Horsse or Bullocke sicke, or any other Cattell else, they use to take the roote of blacke Ellebooz, called of some Consiligo, of others Bearesfoot: and so; a Bullocke, to thurst it in the Dewlap; so; a Horsse, in the brest; so; a Swine or Sheape, through the eare, making a hole with a Bodkin, & thursting the roote presently through, which the new wound holdeth fast that it cannot fal out, whereunto all the whole force of the poyson doth straight-wayes gather, and runneth out in filthy water. Perfumes in this case (as Vegetius teacheth) do much good, as Bimstone, unslacked Lime, Garlick, wilde Marjoram, & Coriander siede, laid upon the coales, and the Oren so held as they may receive the smoky by their mouth & nose, that it may fill the braine, & their whole body with a healthfull ayre. It is good also thus to perfume the whole body, both so; the health of the sickie, and preserving of the whole. Before I proced any farther, I will set you downe what kinde of Spices, and what quantitie you ought alwayes to have in a readines so; your cattel. You must haue one pound of Fenegreke, halfe a pound of Liquerousse, one pound of Graines, Curmeticke, halfe a pound or a quarterne of Bayberries, one pound

Setters
woer.

of Long Pepper, halfe a pound of Triacle of Cean, a pound of Anissted, halfe a pound of Comin, halfe a pound of Padder, Dytment, halfe a pound. The heare whose roote you may use (as I said before) groweth in many places in the Woods: it was once brought unto me by chance from Darndall in Sussex, by one Richard Andrewes, a god painfull searcher out of such things. For beside his present remedying of Cattell, he serueth against divers diseases in a man, specially for the Quartane, as the late ned Mathiolus hath in his description of Plants mentioned.

To returne to my Cattell: if they want their digestion, or For Crudi-
chaine not cudde, which disease is perceiued by often belching, ditie.
and noyse in the belly, with soz bearing of their meate, dulnesse
of their eyes, and not licking of themselues. Take a handfull of
Pelitorie of Spaine, as much Peacegrace, as much of
Fethersew, Sage, Horehound, and Bay Salt, thre pintes
of very strong new drinke: seethe them all together thre oz
souce walloppe, and give it him bloud-warme in the morning,
not suffering him to drinke till the afternone: if you neglect
this disease, so that he be payned in the belly, and full of griefe,
he will groane, and never stand still in one place. For remedie
whereof, you shall binde his tayle close by the Rump, as straite
as may bee, and give him a quart of Wine, with a pinte of
the purer Oyle: and after drife him apace for the space of
a mile & a halfe: annoynce your hand with grease, and take him:
afterwards, make him cumme againe: some use to let him bloud
in the taile, within a handful of the rump.

There is a disease which they call the Wolse, others the Tail, The Tail,
Taile, which is perceiued by the losenesse, or softnesse betwixt
the joynts: take the Taile and sticke betwixt euery joynt, and
where the joynt seemeth to be a sunder, or is soft and not close as
the other joynts, there take and slit him the longest way under
the Taile, about two inches long, and lay in the wound Salt,
Sote, and Garlick, & binde it fast with a clout about it. The
Cholike, or paine in the belly, is put away in the beholding of
Geese in the water, specially Duckes, (as you sayd before of
horses:) for the sight of the Ducke, as Vegetius and Columella
say, is a present remedy to this beast.

For the Flire, or the Laske, which in some places they call The Flire,
the

The Ray, take Siores and dry them in powder, and give it them to drinke : if it be th. bloody f. i.e., the old fellowes were wont to cure it in this sort: They suffered not the beast to drinck in thre dayes, and kept him fasting the first day, & gave him the fones of Beazins, or Grapes, dyed and made in powder two pounds, with a quart of sharpe tart Waine, and suffered them to drinke no other drinke, & made them eate the browing of wilde Olive trees, and Pasture trees : and if they mended not with this, they burnt them in the sozehead to the very braine pan, & cut off his eares. The wounds, till they were whole they washed with Dre pisse : but the cut parts were to be healed with Dyle and Pitch.

**Laske in
Calues.**

If your Calues have the Ray or Laske, take sweet milke, & put therein the Remnet of a Calfe, make it no thicker but as the Calfe may well drinke it, and give it him luke-warme.

The Cough

If your Bullocke have the Cough, and if it be but begining, give him a pinte of Barley meale with the yolke of an Egge, Beazins boyled in sweet Wine and strained, a pinte; mingle them together, and give it him fasting. Also Craines beaten and mingled with Flower, stred Beanes, and meale of Lentils, all stirred together, & given him in a mash. Columells would have you give them Crasse chopt, and mingled with Beanes that are but a little broken in the spill, and Lentils small ground, and mingled with water. The old Cough they cured with two pound of Hypsope, steeped in thre pintes of water and mingled with Flower, which they made him to swallow, and afterwards poured into him the water wherin Hypsope had bene sodden, also Peason, with Barly water and sodde. Yom, when they had the Cough, and Consumption of the Lungs. To keape them alive, they used to burne the roote of a Hasell, and to thrust it through their eares, giving them to drinke a pint of the iuice of Leks, with the like measure of Dyle and Wine. For the Cough of the Lungs, I use to give them long Pepper, Craines, Fenegrecke, Bayes, Anniseede, Oxtment-balles, Turmericke, and Madder, beating them all together, and saughing them in god Ale grounds. If your Calues have the Cough, take Centozie, and beate it to powder, and give it them.

The Feaver

If they habe the Feaver, or Ague, you shall perceiue it by the watring

watring of their eies, the heaviness of their head, the dixeling at their mouth, beating the veines, and heate of the whole body: let them fast one day, the next day let them blood a little betimes in the morning in the tayle, after an houre give them a thirtie little stalkes of Colworts sod in Oyle, Water, and salt, which must be powred faling in them, five dayes together. Beside, you may give them the tops of Olive Treas, Lentils, or any tender brantings, or branches of Vines, and wipre their mouths with a Spunge, giving them colde water thrise a day.

The blood falling downe into the legs, causeth them (as Vegetius saith) to halt, which as soone as you perceive, you must straightwayes looke upon the hose, the heate whereof will declare his grise, beside, he will scarce suffer you to touch it. But if so be the blood be yet above the hose in the legs, you shall dissolve it with god rubbing, or if not with that, with scarifying, or pouncing the shinne. If it be in the scote, open it a little with a knife betweene the two clawes, and lay to the soze, cloutes dipped in Vinegar and salt, making him a shooe of Wcome, and be well ware he come not into any water, but stand dry. This blood, if it be not let out, will breed to matter, which will be long ere it heale: if it be opened at the first with a knife and made cleane, and after cloutes dipped in water, salt and Oyle laid to it, at the last annointed with olde Hervines grease, and Goates suet boyled together, it will quicklye be whole. This disease, as I take it, the country people call the Fowle, or the Wilpe, which they sometime cure with drawinge a rope of straw, or hayre, through the Clese, till it blinde, or by searing of it with a hot yron. If the blood be in the lower part of the Hose, the uttermost part of the Cle is pared to the quicke, and so the blood let out, and after the soot wrapped with cloutes, and shooed with Wcome, you must open the Hose in the middess, except the matter be ripe. If hee halt by reason of the Crampe, or paine of the sinewes, you shall cubbe his knaes, thighes, and legs, with salt and Oyle, till he be whole. If his knaes, or ioynts be swolē, they must be bathed with warme Vineger, and Linseed, or Oyle beaten and layd to it, with

with water and Honey. Also Spunges wet in hot water, and dyed againe, & annoyncted with Honey, are very god to be layd to the knee: if under the swelling there be any humoure, Leaben, or Barly meale sod in water and Honey, or sweet Wine, must be layd to it: and when it is ripe, it must be opened with a knife and healed as before.

All grieses generally, if they be not broken, must be dissolved while they are new, with bathes, & fomentations: and if they be old, they must be burned, and the burning annoyncted with Butter, or Coates suet. If he have hurt his heele, or his hose, ston Pitch, Brimstone, and greasy Woll, must be burnt upon the soare with a hot yron. The like must be done when it is hurt with a Stubbe, a Thorne, or a Spaille, being first plucked out, or if it bee very depe, it must bee opened wide with a knife, and so handled: for hibed heelles, take and cast him, and binde his legges fast together, then take your knife, and cut it out as neare as you can, and let him bladewell: then take a penny-worth of Merdegrease, and the poalke of an Egge, and temper them well together, and bind them close to the place, and he shall heale. If the Udder of your Kine doe swell, you shall bathe them with Iuy, sodden in stale Bare, or Ale, and smoke them with Honey coames, and Camomell. If the Bullockes saete be neare wozne, and surbated, wash them in Dre pisse warmed, and kindling a few twigges, or sprayes, when the flame is done, cause him to stand upon the hot imbers, and annoynct his hornes with Tarre, and Oyle, or Hogges grease. They will never lightly halt, if after they haue biene laboured, their saete be washed well with cold water, and afterwards their pasterns, and the places betwene the Clens be rubbes with old Swines grease.

Scabbes.

The scabbes, or mangenelle, is gotten away with rubbing them with stamped Garliche, which also cureth the biting of a madde Dogge: besides, Pennyall, and Brimstone, beaten and boyled with Oyle, Vineger, and Water, and after whilste it is warme, a little Atom made in powder, and cast into it, doth cure the scabbe, being annoyncted in Sunshyne. Others use to annoynct them with Butter, and Bullocks pisse: and some againe take Rose, Tarre, and Wine, and use it as a Pultesse.

Hidewound,

Hide-bound, is when the skinne so stickes to his backe, that you cannot take it up from the ribbes, which happeneth by sufferring him to take cold after his sweat, or if after his labour he be wet with raine, or brought low with sickenesse: which, because it is very dangerous, you must looke that when they come from their labour, and are hot, you sprinkle them with wine, and give them some pieces of fat, or suet. But if they be already hide-bound, it is good you seethe some Bay leaves, and with the warme decoction thereof, to bathe his backe, and to rubbe him all over with wine and Oyle mingled together, and to lyst and plucke up the skin round about, and that abroad while the sunne shineth. If his bleeding stench not after the cutting of the veine, the remedy is, to lay his owne dung to the place. A common medicine for all diseases (as Vegetius reporteth) is this: the roote of a Sea-Onion, the roote of a Poplar, and the common Salt, of each a sufficient quantitie, lay them in water, and give it your Cattell to drinke till they be whole: which also being given in the beginning of the spring, for the space of fourteene dapes, preserueneth them from all sicknesse. Now that you have heard in what sort the old husbands did remedie the diseases in their Cattell, I shall briefly declare unto you the remedies that are obserued in sundry diseases at this day, whereof I have chopt in some amongst the medicines before.

The sickenesse of the Lungs is perceived, if the Dewlap ^{or the} be hard closed together very faire up: also in hard faling the ^{Lungs,} hide upon the backe, it cracketh, or snappeth much: also a shott husking, and thrusting out the tongue withall: if it be much perished on the left side, he is incurable, which you shall perceive by the Hide, which will sticke fast on that side, and likevise the Dewlap: if he be faire gone, he will groane much. The remedy for this disease, is to take long Pepper a peny-worth, round Pepper as much, of Graines two peny-worth, of Pace as much, Cloves a penny-worth, of Anisicks a penny-worth, of Spadet two penny-worth, of Triacle of Cean, the outer rinde of Walnuts dyed, and made in powder, Juniper berries powdered, Dre Lung-wort, Fetherfewe, Pearbegrace, Tansie, Rose Spistes, Bay berries powdered, a penny-worth

of Garliche, a quart of Chamberly, a pinte of Salt, a quantitie of Butter. Hettir him before, or immediatly after this medicin given.

Setting of
Cartell.

The order of Hettir a Bullocke is this : take Hettirwoort, otherwise called Beare-swole, and Garliche, like quantitie, pale and stampē the Garliche, and pare the Hettirwoort cleane, and wrappe them well in Butter; then cut the Dewlap two inches behind the sticking place, to the brestward, & cut it alongstwise about two or thre inches, and pull the Dewlap with thy finger, or with a sticke round about, one side from the other, as much as you can possiblie : Then put the Hettirwoort, Garliche, and Butter, as much as thou canst well put in, and thus doe on both sides the Dewlap, then rowle him so that the string may goe through both holes on both sides the Dewlap, alwayes remembryng to cut the Dewlap a hand boade, or above the bottome and in any wise to rent him to the bottome, before you put in the medicine. The thrid day after the Hettir, loke to the opeing the wound, and let out the corruption(if it be come down) if not, put in moze of the medicine, and turne the rowle : and if it be much swollen, and hard, and will not rot, take a hot iron, and take up part of the soare, the skims, and the flesh, in such place as thou seest most conuenient, so as it come not to the bone, and thrust the iron through on the one side, and on the other, or once right under, if the swelling be right beneath, and Tarre him wel if the flies be busse. Whiche flies, if they chancē to get into the soare, take a cloth, or towell, and lappē it about a sticke, and put it into shalving hot Tarre, and so among the Magots, searching every corner wel. After you have pearced him with the hot iron, remember to take a little sticke, and Lowe, and dipping it in Sallet Dyle, or wolle Dyle, to tubbe the hole where the yron passed.

The Gall,
or Yellowes. The sicknesse of the Gall, is knowne by the running eyes, or if he have much yellow eare-ware : it is also discerned by the browne yellowes under the upper lippe: the Cure is this : Take Chamberlie, god Ale-groundes, or Beire-groundes, hard Soote in powder, Gallwoort, beasts Lungwoort, planten leaves, Peache-grace, Hempseed, or Hempe toppes, Garliche stamped, a peny-worth of Aqua vitæ ; for a great Bullocke, take almost a quart

quart of this medecine, soz a small Bullocke, leffe: when he hath aynde, take Salt, Loame of the wall, and leavened bread, & rubbe well his tongue, and all the rose of his mouth: then wash his backe, & chase it well with Chamberlie, luke warme: gather all these Herbes in Summer, and haue them, & make them in pouder. This medecine strecth likewise for the Lungs.

If a Bullocke be diseased in the Liver, he complaineth sick in Forthe the legges, which will so grieve him, that he shall not be well Liver.

able to stand, though he be in god liking: the remedie is this:

Take a quart of god Ale (if it may be gotten) if not take Beer, put therein Libertwort a god handfull, Woynewort as much, a penny-worth of Garlick, halfe a penny-worth of Madder, a penny-worth of round Pepper, as much long Pepper, a penny-worth of Cloves and Rose, a penny-worth of Triacle, mingle them together, the Herbs being powozed, and give the Beast a drinke luke-warne.

The signes of the Blaine are these, Swelling about the face and the eye, and somewhat in the body: if it bee in the body, it swelleth much there: the onely remedie is: Take and search him in the mouth, if you perceiue blisters under the roses of the tongue,

& other place there abouts, then cut them to the bottome, and let them out, and rub the place with Salt: search him also in the bodie at the fundament, by the arme or hand of some young stripling: and when his arme is in as farre as he can, let him turne his arme upward, and hale for the Blaines, Blisters, and breake them with his nayles, pulling them quite out: sic that he amout his hand well with Crease or Soape.

There is a disease called the Sprenge, whereto he will smite his head The backward to his belly, and stamp with his legges: you must

put your hand into his fumtement, as farre as you can, and pull out the dung, then thall you finde blood, pull the blood quite out,

and take a god handfull of Way salt, and put it in at twise, as

farre as you can: if he have this disease, he will swell in the body, and caret much to dung. If he have the Staggers, he will looke

very red about the eyes, and cast his head backward: take the fourth part of an ounce of Pepper, bruise it, and take halfe a pinte of sharpe Vineger, warmed blood warne, and poure it

into his Mouthhills, and hold his head well upward, and let

The Blaine.

Sprenge.

The Stag-
gers.

The stundie
or Dafe.

him bloud at the nose. If your Bullocke turne sound, and have the Dafe, you shall take him by the heare, and feele upon his forehead, and you shall feele it with your thumbe: cut the skinne crossewise right in the place, and wipe away the bloud as it doth encrease with a clout, and binde a cloth over his head, and kepe it warme. If your Oren pisse bloud, kepe them fonce and twenty houres from water, and then give to every one a little dishfull of rennet curds in a quart of milke, let them not drinke in seuen houres after. There sometime runneth a bloud upon the backe of a Bullocke, which will make him drake his legs after him, and go as if he were swaine in the Chine: cut off a sygnt or two of his tayle, and let him blinde: if he blinde too much, knit his tayle, or seare it.

Panties.

Taint.

Gargyfe.

For all dis-
eases.

Pising of
bloud.

If he have the Panties, he will pant much, and shake in the flanke, and sometime drake downe: give him a little rennet, with Sowte & Chamberly. If he swell of the Taint, or stting, drinke, give him Drine, salt, and treacle to drinke: if he chance to have a stroke in the eye, take the iuyce of Damaledge, Fenel, and the white of an Egge. The Gargyle is a swelling beside the eye upon the boaine, like a Bosch, or a Wyle: if your Bullocks haue it, cut off round about it pieces of skinne as broade: then cut also round about those pieces one narrow lappe of the skinne, which will kepe the disease from his lippes, so: if it come to his lippes, it is incurable: Then take Chamberly and Salt, and sethe them together, and wash the places where the skinne is cut off, and wash it therewith evening and moring, till the swelling be gone, scraping off the scabs, and other filth at every dressing to the quicke, till the swelling be gone, not sparing it so long as it watereth and runneth: when the swelling is cleane gone, take garnicle and Honey, boylen together bloud warme, and anoint all the laid places, which will both heale it, & cause the haire to come againe. We have certaine medicines besides, that we use generally for all diseases; as this, which is very sonctaigne: Take a handfull of heasse Lungwort, a handfull of other Lungworts that leareth for the pot, a handfull of inward rinde of Elder, a handfull of Helpe, chop them small, and put them into a pottle of good Ale, let them sittre till they be soft, then stirre them, and put in the liquor a peny moorth

penny-worth of long Pepper, a penny-worth of graines, a penny-worth of Liquerife, a penny-worth of Aniseede, a halfe-penny-worth of Comen, a penny-worth of Turmericke, all well beaten, and put into the liquor, with a quarter of a pound of Spadder: and whilſt all these doe ſeath, take a great bole diſh, and put therein a handfull of Bay ſalt, halfe a handfull of Garlick, ſoure new layd Egges, ſhels and all, two balls of Oxtment, grinde all theſe things with a Pekle, in the bowle: then take the liquor aforesaid from the fire, till it be halfe cold, and put the warme liquor into the bowle, with the Garlick, Salt, Egges, and Oxtment, brew it well together, and give the Beaste to drinke bloud-warme, or a little moare. Another of the ſame ſoxt is this: Two penny-worth of Comer, a penny-worth of Graines, two penny-worth of Anisleds, a penny-worth of Bay-berries, a penny-worth of Fenecrike, a penny-worth of Turmericke, one ball of Oxtment, a penny-worth of Triacle, or rather for the Lungs, thare or ſoure ſpoonfuls of Spadder, beate them all together, and put them in thare quarts of drinke, ſet them on the fire, til they be bloud-warme, give the beaste no drinke in the morning before, no: till noon after, in the you ſummer, and in the winter till night: or if you will, may give them this medicine following: Take flint ſcote, that is hard dyed upon a poſt or roſe, and beate it into powder with ſalt, then take running waſter, and ſathe it, ranke Juie, with the ſcote and ſalt, and when the Juie is loſt, take and ſwing out the iuyce, and ſtraine all together through a linnen cloth, and give it your cattell to drinke bloud-warme, in the ſpring, and at the fall of the leafes.

Diseases of
the necke.

If any Dres necke be galled, bruised or ſwolne with the poake, or if hee haue the cloſh, take Traine oyle and grinde it with white-lead till it come to a ſalue and therewith annoynt the ſoze, and it will not onely healſ the grieſe, but alſo harden the ſkinne that it will never gall after:

Of mi-
liking.

If a Beaste fall into any unnaturall miſlike or leanenesse, which you ſhall know both by his ſhape and the diſcolouring of his hayze, ſit let him bloud, then take of old brine a quart, and mixe it with a good handfull of Hemis dung, and ſo give it the beaste to drinke.

Impostume.

If a Beast be troubled with any Impostume, Wyle, or Watch take Lillie roots, and boyle them in a quart of milke till they be soft, so that you may make them like papp, then scalding hot clap them to the greise, and when the Impostume growes soft, lase it with an hot Iron and let out the fith, then heale it up with Larre, Serpentine and Oyle mixt together.

Griefe in the
sinewes.

If your Beast have any griefe in his synewes, or that they be weake, shrinke or tender, then take Mallowes and Chick-wede, and boyle them in the dreggs of Ale or in Winegar with Witching sic, and very hot apply it to the offendid part.

Biting
with a mad
Dog.

If your beast be bytten with a mad dogge or any other benemous Beast, take Plantaine, and beate it in a morter with Bolearmonio, Sanguis Draconis, Barley meale and the whites of eggs, and plasterwise lay it unto the sore, renewing it once in fourre and twentie houres.

Lice Ticks

Beasts that are bred in Woods, under the drappings of Trees, or in Waraine and unwholesome places, are much subiect to Lice and Ticks and other vermine; to cure which wash all their bodies ouer with strong old Wine wherein hath bene boyled god stoe of Tobacco, and doe it very warme.

Wormes.

There is nothing killeth wormes, in the Spaine of a Beast soone as haben chopt small, and mixt with swete Butter, and so give the Beast, thre or foure prettie big Ballis thereof and to kepe him fasting two or thre houres after.

The Goute.

If your Beast be troubled with the Goute, which you shall know by the sodaine swelling of the ioynts, and falling againe, you shall take Galengal and boyle it in the dreggs of Ale with swete Butter, and pulstwise, lay it hot to the offendid part.

Of Milting.

Milting is, when a Beast will oft fall, and oft rise as he is at his labour and cannot induce to stand any while together; it proceedeth from some stroake or hysse, either by Cudgell or other blunt weapon, and the cure is not to rayse him sodainely, but to give him in a quart of Ale warne, halfe an ounce of Stoney Pitch in powder, and as much Sopermacte.

Whetherd.

A Colue that is Whethered, is when after her Calving she cannot cast her cleanning, and therefore to compell her to cast it, take the juice of Bettonie, Pugwoote, and Mallowes of each thre spoonfulls, and mixt it with a quart of Ale and give it

it the beast to drinke warme, and also give her to eate scrotched
Barley, and it will force her to abyde her hunchen sooneinly.

If your Beast either in travell, or otherwise have receaved To draw
any wound either with Thorne or Stubb, and the Thorne or ^{out thornes}
Stubb remaineth still in the wound: To draw them out ^{&c.}
take Blache Sonayls and Blache Soape, and beat them to a
halue, and apply it to the soze, and it will draw them out.

If any Beast have a Bone broken or misplaced, after you Of bones.
have set it right and in his true place, you shall may a plaster
about it, made of Burgundie, Pitch, Tallow and Linseed-oyle;
then splent it and cover it over with a red-cloath, and let it not
be stirred or tensed for the space of twentie dayes in which
time it will knit.

There is nothing doth purges a Beast so naturally as the Purging of
greene hoede-grasse which groweth in Orchards under Trees,
Nor any Medicine doth purge them better then Matte, Butter,
Honey, a little sweete Soape and sugar-Candie, and given in
Ballis as bigge as an Venus Egge.

If a Cowe after her Calving, cannot let downe her Milke, Of breeding
you shall giue her a quarte of strong Posset Ale mixt with Ani-
seds, and Coliander-seds, beaten to powder, to drinke every
Morning, and it will not onely make her Milke spring, but also
increase it wonderfully.

If your Beast be subiect to the Rott, or Rottemesse, whiche Of the Rot,
you may know by his leanenesse, mislike, and continuall scou-
ring, you shall take Bayberries, beaten to powder, Spicche, Jul-
leaves, Elder-leaves, and Feathersue, and a godl lumpe of drye
Clay and Baysalt: mixe these together in Strong Wine, and
being warme give the Beast a pinte thereof to drinke for sun-
die mornings, and it will knit him.

A Shrew-mouse which is a Mouse with shrewe uneven leggs Of the
and a long head like a Swynnes, is a venemous thing, and if it Srewes-run;
bite a Beast, the soze will swell and ranckle, and put the Beast
in danger; but if it onely cumme over a beast, it siebleth his hin-
der parts and maketh him unable to goe: the Cure then for be-
ing Shrew-bitten is the same which is formerly declared, for
the biting of a mad dog or venemous Beasts. But if he be
Shrew-cumme, you shall then liske out a Briar or Bramble
that

that groweth at both ends, and casting it into the Beast through the same, then cut up the Bramble and beat the Beast therewith and it is a present remedie. These Wyrars are found in the Furrowes where Coyne groves*.

The Buffet. Next to these Cattell I place the Bubale, called of the common people Buffes, Plinie Bisontine, are common in Italy, beyond the Appenin: a wilde and savage Beast, that for their ferrenesse, are handled with rings of Iron in their noses; of colour blacke, their bodies large and mighty, their leggs well set, and knit very strong: and in respect of their bodie, shourt, their hornes large, crained, and blacke, their haxe small and shourt, their tayles little: they are in those parts used for carriage, draught, and like uses, as the Ox. Of the milke of this beast are made Chieses, that about Rome and other places are greatly esteemed. Columella counts them to be strong meate, and heavy of digestion.

Sheape. Now next unto the greater sort of Cattell, the chiefest place is to be assigned to Sheape: yea, if you consider the great commoditie and profit, they are to be preferred before them: for as Oxen serue for the tilling of ground, and necessarie use of men, so is to this poore beast ascribed the safegard of the body; so the Sheape both with his flesce apparell us, and with his milke and wholesome flesh nourish us (as the Poet witnesseth.)

Poore beast, that for defence of man, at first created wast,
And in thy swelling udder bear'st, the iuyce of dainty tast: (faile
That with thy flesce keepst off the cold, that should our limbs aff.
And rather with thy life, then with thy death, doest us availe.

Of Sheape there are sundry brieses. The rich and a champion Countrey briedeth a large and a great sheape: the barren and the cliffe, a reasonable stature: the wilde and the mountaine ground, a small and a wierish sheape. The old husbandes did greatly commend the brie of Milet, Appulia, and Calabria, and most of all, the brie of Taranto, next of Parma, and Modena. At this day, for the finenesse of their flesce, greatnesse of burthen, largenesse of body, and excellency of perfection

every

every way are most in price the shewe of England. Varto counseileth all such as would buy Ewes, to have their chiefe consideration of their age, that they be neither too old, nor too young: the one of them not yet come to it, the other already past profit: but better is that age, whereof there is some hope, then where there followeth nothing but a dead carcasse. Your best is therfore to buy them at two yeres olde, and not to meddle with such as are past thre: their age is to be knowne by their teeth: for the tath of the olde ones are worne away: next must you looke, that your Ewe have a large body, deepe woolled, and thicke over all the body, specially about the necke and the head, and god stoe upon the belly: so such as were bare necked and bellied, the old husbands alwayes refused. The necke must be long, the belly large, the legges short, though the shewe of England be long legged, in some particular places, as in the Marshlands and such like, but not otherwise. The tayle in some Countrey short, in others very long: so in Arabia some have tayles a cubit long, but wonderfull broad: others, (as both Herodotus and Elianus affirme) thre cubits long, so that the Shepheards are forced to tye them up, for being hurt with trayling upon the ground. In Egypt a Ramis tayle hath bene found to weigh twentie pound and more. The Ramme must have his hornes great, winding inward, and bending to the face, though in some places they habe no hornes at all, and yet no better Rammes: the hornes must rather crookle inward then grow straigh up. In some Countries that are wet & flosomy, Goates and Rammes are to be chosen that have the greatest & largest hornes, whereby they may defend their heads from storme and tempest: and therfore in cols and stormie Countries, the horned Rams are best: in milde and gentle clymatis, the pollard. Beside, there is this inconuenience, when hee knowes him selfe to be armed, hee will alwaies be fighting, and unculy among his Ewes, and though he be not able to serue the turne himselfe, yet will he suffer no other Ramme in the flocke, till he be even cloyed, and lamed with letchery. The Pollard on the other side, finding himselfe unarmed, is milde and quieter by much: wherefore the Shepheards, to restraine the rage of the unruly,

The choyse
of Ewes.

unruly, doe us to hang before his hynes a little boord with sharpe pycks inward, which keeps him from his mannesse, while he perceiueþ himselfe to be hurt with his owne blood: others say, that if you pierce his hynes with a wimble, next to the eares, where they windre inward, he wil leave his brawling. In some places also the Ewes are horned: but to the Ramme, His eyes must be browne, his eares must be great, his brest, shoulders, and buttockes broad, his bones great, his tayle broad, and long: you must looke beside, that his tongue be not blacke, nor peckled, for commonly such will get blacke ampyred Lambes, as Virgill rioteth:

And though the Ramme in sight be white as snow,
If blacke within his iawes his tongue be wrought,
Refuse him quite, lest if he leape thy Ewe,
He doe infect thy Fold with colour nought.

¹⁵
To buy
Sheep.

Wher you goe about to buy Sheepe for the stocking of any ground, be sure to byng the Sheepe you buy from a worscher sole to a better and not from a better to a worse. The leare which is the earth on which the Sheepe lyeth and giveth him his colour, is much to be respected; the Rendgeare is held the best, the duskyish inclining to a little rednesse is held tollerable; but the whiste or durtie leare is stache naught: in the choyce therfore of your Sheepe chuse those which have whole shoves, red inner-lippes and bright eyes; let them be big boned, and depe woolled, the Staple being closse and thicke, soft, greastic, well curled, and downy, so that man shall have much adoe to part it with his fingers; These Sheepe beside the bearing of the best butchern are alwayes the best Butchers ware, fise the fattest and sell the dearest *. Be sure every yere once, to make your muster, and supply the places of such as are dead, or sicke, with a new and a sound number, so that the Master be not deceiveth with an old unprofitable flocke. The haconesse and crueltie of the cold Winter, doth oftentimes beguile the shap, heard, and destroyeth many of his flocke: whereof (presuming of their strength in the end of the Summer) he had made no supply, and therfore Columella is of opinion, that the age for

bread

þyed ought not to be leſſe then thre yeres, nor above eight, both because that neither of the ages is meete to be kept: and also that whatſoever commeth of an old ſtock, hath lightly a ſmacke of his old parents imperfection, and probereth either to be barraing or weake. The ſelue ſame Columella would have the Eues to be put to the Ramme after they had paſſed two yeres old, and the Ramme to be of five yeres old, ſo; after ſeven they decay. In many places at this day, they ſuffer both the kinde to haue from two yeres old, till nine: but before two yeres, it is not good to put either the Ramme or the Ewe to haue, althoſh in moſt places they ſuffer the Ewe at a yere old. The Ramme is put by his purpoſe, by the Wickers, or Wulcushes, tyed to the Eues tayle, but moſe conſiderately, by going in ſeverall paſtures: howbeit, they are not commonly ſevered, but ſuffered to goe together. The Rammes that you would have to ſerue your Eues, muſt aſfore their ryding, be kept in good paſture, ſo; two moneths, whereby they may be the better able to doe their busynesse: but in our Country we commonly ſuffer them to ſeade together. To increase their luſts, you shall give them in their paſture the blades of Onions, or knot-Craſſe: They rather covet the old Eues then the young, becauſe they be eaſier to be entreated, and the Rammes themſelues in age be the better. By knitting of the right ſtone, you shall haue Ewe Lambes, and of the leſt, Ramme Lambes: alſo their bloſſoming in the North-winde, getteth Ramme Lambes, and in a South-winde, Ewe Lambes; one Ramme (as Didymus affirmeſt) ſufficeth ſo; ſixtie Eues: when th: y haue all conceiued, the Rammes muſt againe be banished, ſo; dangering and harming the Eues. During the time of their bloſſoming, they are to be waſted in one place (as both Varro and Plinic affirme) becauſe the change of water both diſcolourefth the wooll, and dangereth the Lambe. The policie of Jacob the Patriarch, in procuring of partie coloured Lambes, is well enough knowne. The beſt time for bloſſoming, is from the ſetting of the Bearward, to the ſetting of the Eggle: (as Varro and Columella haue written) which is (as Pliny interpretes it) from the thico Ides of May, till the thirtene Kalends of Auguft: others thinke it good all the yere long, many preſerue the Winter Lambe beſore thole that fall

fall in the Spring, as a creature that of all others best broketh
 his Winter byth. But howsoeuer these be the opinions of the
 Ancients, yet this is an infallible rule knowne in our present
 experiance, that the best time of the Ewes to bring forth their
 Lambs, is (if they be pasture shape,) about the latter ende of
 Aprill, and so untill the beginning of June; but if they bee field
 shape, that is such as live on the common and on the fallow
 field, then from the beginning of January till the end of March,
 that their Lambs may be strong and able before May day,
 (which is the time of opening the fallow field) to follow their
 Dammes over the lands and the water furrowes, which weake
 Lambs are not able to doe. And although to yeane thus early,
 when there is no grasse springing be dangerous, yet the Hus-
 band man must provide shelter and sweete fodder or else god
 winter fog, and the Shepheard with great vigilance must bee
 stirring at all houres to prevent evills; and though the Ewe at
 the first be scante of milke, yet as the warme weather increaseth
 and the Grasse beginneth to spring, so will her milke spring
 also.

The thunder, if the Ewes goe alone makes them cast their
 Lambs, and therefore it is god to let them go with company
 for avoiding that perill: they goe with Lambe one hundred and
 fiftie daies, or five moneths: such as are afterward lambed, are
 fable and weake, and such were of the old wyters called Cord;
 for the most part they bring but one Lambe a piece, yet often-
 times two, and if they be well fed, syre at a time. It hath bin
 seene in Gelderland, that five Ewes have had in one yere fiftie
 and twentie Lambes: it may seeme peradventure to many in-
 credible, and yet no great marvelle, since they have twise a
 yere most times two, and sometime syre at a time. The
 Shepheards must be as carefull as a Midwife in the yeanning
 time, for this pore creature (though she be but a shewe) is as
 much tormented in her delivery, as a shrew, and is oftentimes the
 more dangerously vexed and pained in her labour, in that she is
 altogether without reason; and therefore it behooveth the Shep-
 heard to be skilful in medicining of his Cattell, and so curming
 a midwife withall, as if needs require he may helpe his Ewe,
 what danger soever happen. The Lambe as soone as he is
 fallen,


 When Ewes
 it could bring

fallen, must be set on foot, and put to the Dammes udder; & Ordering of
Lambs.
 oftentimes his mouth held open, the milke must be milked in,
 that he may learne to sucke; but before you doe this, you must
 be fise to milke out the first milke called Colostra, whereof I
 will speake hereafter: for this, except some quantitie be drawen
 out, doth hurt the Lambe. If the Damme die, you must suckle
 it with a ho;ne: if the Lambe will not of himselfe sucke, he must
 be put to it, and his lips annointed with swete Butter, and
 Divines grease, and seasoned a little with swet milke. As
 soone as they are lambed, they must be shut up together with
 their Dammes, whereby both the Damme may cherish them
 and they learne to know their Dammes. Afterward, when they
 begin to ware wanton, they must be severed with Hardelles:
 or (as Varto witteth) after ten daies they must be tied to little
 stakes with some gentle stay, for hurting of their ioynts, and
 waring leane with too much play. The weaker must be seve-
 red from the stronger, for hurting of them: And in the Morning
 betimes, before the flocke goe to palkue, and in the Evening
 whens they be full, the Lambs must be put to their Dammes:
 and when they ware strong, they must be sed in the houfe, with
 Clover, and swete grasse, or else with Wanne, and flowre.
 And when they have gotten greater strengthe, they must be let
 out with their Dammes about noon, into some sunny and
 warme Close nere adioyning. In the meane time, you must not
 deale with the milking of Cives, so shall you have them to
 beate the more woll, and bring the moxe Lambes. When
 the Lambes are taken from their Dammes, god hied must be
 had, that they pine not away: and therefore they must be well
 cherished in their weaning time with god patches, and well
 kept, both from cold, and extreme heat. Now after that they
 have forgotten the udder, that they care not for their dammes,
 then shall you let them feede with the flocke: howbeit in most
 places the Lambes are suffered to feede in the flache together
 with their dammes, and to sucke till hauefull time, till the
 Dammes themselves doe weare them. Varto woulde haue you
 not to geld your Lambes under six moneths old, and that in a
 season neither too hot, nor too cold: but experiance teacheith us,
 that the best gelding is under the Damme when she be young-
 est; for in the elder (as in all other beasts) it is dangerous.

Those

Whore that you will keape for Rammes, you must take from such ewes as use to have two at one time.

The first yere a male Lambe is called a Weatherhog, and the small Lambe is called an Ewe-hog; the second yere the Male is a Weather, and the Female a Sheave, and the she may be put to the Ramme, but if you let her goe over that yere also, then shie is called a double-Sheave, and will both her selfe be the godlier shewe, and also bring forth the godlier Lambe, whence it comes that the best shewe-masters make more account of the Double-Sheave then of any other beder.

The best pasture for shewe, is the grasse that is turned up with the Ploow, and groweth upon fallowes: the next is that, that groweth in dry Medowes: the marshy ground is to be refused, and that which groweth neare unto Lakes and Fennes: the plaine and the champion fiedes and Dolones, are best for the delicatest and finest wooled shewe. To be short, the shorter and finer the Grasse is, the meeter it is for shewe: and yet is there no pasture so god, or so fine, but with continuall use your shewe will be weary of it, except the Shpheards remedy this fault with giving them salt, which (as a sauce to their foode) he must set readie in Summer when they come from pasture, in little troughs of wood, by licking whereof they get them an appetiti both to their meate and their drinke. (Aristotle affirmeth) you must in Summer every fist day let them have salt, a pecke to every hundred: so shall your shewe be alwaies healthy, ware fat, and yelde you plenty of milke. Moreover, against the Winter rot, or hunger rotte, you must provide to set them at home in Cratches. They are best fed in the warmer countries, with the leaves and brounses of Elm and Ash, and the Haste that is made after Harvest in the end of Summer, because it is softest, and therefore swifter than the other.

Pasture for sheep and to preserue them. Now for the generall preseruation of shewe, tis god to sied them as much as you can upon high grounds which are dry and fruitfull, the grasse sweet, yet so short that it must be got with much labour (if they be holding shewe, but if they be pasture or fat shewe, no matter how god the grasse be.) But if you must force persone siede upon low & moist grounds which

which are infectious, you shall not bring your shēpe from the fould untill the ſumme be riſen, and that the Weames begin to draw the dew from the earth, then having let them forth d̄rve them to their place of ſeade, & there with your Dog, chafe them up and doone till they be weatie, and then let them either ſeade or take their rest, which they please ; this chaffing firſt beateth away Meldewes, and all other dewes from the earth, as also thofe Webbs, Hells and Cobweb-blakes, which lying on the earth and a Shēpe licking them up, doe brede rottenneſſe. Also this chaffing firſteth up their naturall heate which drincketh up and waſketh the abundance of moylſure, which elſe would turne to rottenneſſe. Besides, a Shēpe being thus chaffed & weatied will fall to his ſode more deliberately, & not with ſuch gradines as oþerwise he would, and alſo make choyce of that meate which is beſt for his health : this rule is no imaginac̄tion or precept of the Ancients, but a certaine appreved experiment, uſed by an English ſhepheard, who in a rot yere having but th̄e hundred Shēpe, (by this course) lost not one when thouſands died both with him and round about him.

Moþerore the ſhepheard, as alſo the keeper of all cattell, muþ deale gently & lovingly with their flock, & comforting, & cheiring them with ſinging, and whiſtling: ſo the Arabians (as Alianus writeth) do finde, that this kinde of Cattell taketh great delight in Muſicke, and that it doþ them as much good as their paſture. Beside, they muþ be well ware in the d̄ribing of them, & rulinh of them, that they guide them with their voice, and shaking of their ſtaſſe, not hurting, nor hurling any thing at them, nor that they be at any time ſette off from them, and that they neither ly nor ſit : for if they go not forward, they muþ ſtand: for it is the ſhepheards office to ſtand alwayes as high as he can, that he may plainly & eaſily diſcern, that neither the ſlow nor the great bellyed in lambing time, nor the quicke, nor the lively, while they roame, be ſevered from their fellowes: and leaſt ſome thiefe, or wilde beaſt beguile the negligent ſhepheard of his cattel. Of their Paſturing, I think I haþ ſpoken ſheepe ſufficiently: and therefore I meane now to ſhew you of their houſes, or Shēpcroats, whereof there ought to be a ſpeciall regard, that they be conueniently placed, not ſubiect to windes, nor

Stormes, and that they rather stand toward the East, then toward the South. Columella would have them built low, and rather long then broad, that they may be warme in the Winter, and that the straightnesse of the roome hurt not the young. And beside, he would have them stand toward the South: for this brak (though his garments bee warme) cannot away with cold weath'r, neither yet with the great heate of the Sommer. I have seene some shépe houses so framed, as they have had their gates toward the South and toward the East, that they might answer to the seasons of the yere. Columelia wculd have the House set towards the South, and on the backe side a close pastures, where they may safely take the ayre. You must looke besides, that where they stand, the ground be made fayre and even, something hanging, that it may be cleane kept, and that the vaine may be well boyded away: for the wetnesse hereof doth not onely hurt, and corrupt their fete, but also spoyleth their coates, and maketh them ruske and ill favoured. Let there bee no moysture therfore, but always well drewed with dye fern, or strawe, that the Cives that bee with young may lye the softer and cleaner. Let their beds be very cleane; for the cleaner they lye, the better they feed: let them in any wise be wel fed, for a small number (as I said before) well fed, yelde more profit to their Master, then a great flocke barely kept. You must also haue severall partitions to keepe the weaker and the sicke, from the strong and unruley.

And thus much of housed shépe, that are every day brought home: but in some places they are kept abroad, farre from either towne or house, in Forrests, and open wilde fields and downes: in these places the Shepheard carryeth with him his Hordles, and his Nets, and other necessaries to his flocke withall. In the desart fields, when as the Winter pastures, and the Sommer pastures are distant certaine miles asunder (as Varro saith) he would have the flocks that have wintered in Apulia, to be kept in Sommer upon the Mounaines of Kieze: and Virgill thus whiteth of the Shepheards of Lybia:

What

What should I here of Lybian Shepheards tell,
 Or of their Pastures write, and dwellings poore,
 That night and day on Downes, and Desarts dwell,
 Where wandres still the Flocke without the doore :
 And on the ground doth lye the Shepheardhere,
 While he removes with him continually
 His house, and all his household goods doth beare,
 His staffe, his dogge, and all his armory ?

The like have I my selfe sene in Swyitzerland, and other places of Germany, where the Shepheard, lying still abroad with his flocke, folds his sheepe in the night with Hardles, tying their dogges about them for watchmen : the Shepheard himselfe in a little house upon whelle, sleepes hard by his charge. The sheepe of Greece, Asia, and Toranto, and those which they call, Covered sheepe, are commonly used to be kept in houses, rather then abroad, for the excellencie and fuenesse of their woll.

The times of shearing, are in all places one, but varie, according to the disposition of the ayre, the cattell, and the countrey : the best way is to have good regard to the weather, as the sheepe be not hurt by cheating in the cold, nor harmed by soe bearing in the heate. In soime places they have two seasons in the yere for shearing of their shaepe : the first season for their shearing, is either with the beginning of May, or else with the ending of Appill : the second season of their shearing, is about the beginning of September. Such as doe use to sheare their shaepe but once in the yere, doe commonly appoint for their season the tenth of the Moneth of June : about which time also such as doe sheare twise a yere, doe sheare their Lambes,

But the best shaepe-masters doe not allow the shearing of Lambs till they be a full yere old and be called Hoggis. Three dayes before you sheare them, you must wash them well, and when they be full dye, you may sheare them : they doe not in all places shear their shaepe, but in some places (as Plinie saith) pull them. The old Husbandes did account for the best

woll, the Woll of Puglia, and that which in Italy was called the Grecke Fleece: the next in goodness they take to be the Woll of Italy: in the third place they esteemed the Milesian Fleece: the Woll of Puglia is but short, and meete to be worne onely in riding Cloakes. The woll about Taranto, and Cannas, is thought to be passing good: but the best at this day is the woll of England. The finer your pasture is, the finer (as it is thought) you shall have your woll. The woll of such sheepe as are slaine by the Wulfe, and the garments made thereof, (as Aristotle saith) are aptest to breed Lice. If you happen in the sheating to clip the skinne, you must soorthwith annoyst it with Cattre: when you have shozne them, some thinke it good you annoyst them with the iuyce of sodden Lupines, Lees of old Wine, and the veggges of Dyle made in an oyntment: & after thre dayes to wash them (if it be neare you) in the Sea, or if the Sea be farre off, with raine water, sodden with Salt. And being thus ordered, you shall not have them to lose their woll all the yere, but to be healthie, and to carry a dace and a fine flesse.

There be some again, that would have you to annoyst them thre daies in the yere, the dayes being sone after you have washed them with Dyle, & Wine mingled together. Against serpents, that many times lie hid under their cribs, you must burne Cedar, Galbanum, or Womans Hayre, or Harts horne: in the end of Summer is your time for drawing & severing of them (as I told you before) when you must sell your sheepe, that through felblenes, they faille not in the winter. Beside, killing one or two of them, you must looke well upon their Livers, and if the Liver be not sound (for thereby is foreseen the danger) then either sell them, or sat them, and kill them: for very hard it is to save them their Livers being perished. Infected Sheepe are more subiect to Scabbes and Manginess than any other Cattell,

Or if you wash not off the sweat of the Summer with salt water: or otherwise, if when they be shozne, you suffer them to be hurt with brambles, or thornes: or if you putt them into houses, where either Horses, Mules, or Asses have stode: but specially lacke of good feeding, whereof procedeth poorenesse, and

and of pwozenesse scabbes and manginess. The shæpe that is infected is thus knowne. If he either scratch, stamp with his fote, or beate himselfe with his horne, or rub himselfe against a tre: which perceiving him so to doe, you shall take him, and opening his wöll, you shall finde the skinne ruffe, and as it were itchie. Divers men have divers remedies for this maladie.

Constantine out of Dydimus affirmeth, that the scabbes of shép are healed by washing them with vñe, and after annoiting them with Wimstone and Oyle. The common Shepheards, when they perceiue a shæp to fall a rubbing, they straightwaies take him, and sh: doing the hayze, do seare the place with Tare: others doe teach other remedies, more hard to come by, which are not soe every Shepheard, nor every Countrey to use. And if the whole flocke be infected, it doth many times so continue, as it shall be needfull to change houses, and (which in all other diseases behoveth) both Countrey and ayze.

Now before I procede any further into their infirmities, I will shew you the signes how to know a sound shæpe from an unsound, as thus. If a shæpe be sounde and perfyt, his eyes wil be bright and cheatesfull, the white pure without spots, and the strings red, his Gummes also will be red, his Tæth white and even, his skinne on his Brisket or West will be red, and so will each side; betwixt his Bodie and his Shouloer where the Wcoll growes not, his skinne in generall will be losse; his wöll salt, his Breath long, and his fete not hot. But if he be unsound, then these signes will have contrarie faces, his Eyes will be hearie, pale and spotted, his Breast and Gums white, his Tæth yellow and foule, his Wcoll when it is pulled will easily part from his Bodie: and (as before was sayd) when he is dead open him, and you shall finde his Belly full of water, his Suet yellow, his Liver putrefied, & his Flesh moist and waterish;

How to
know a
sound shæp.

Now for their preseruation*.

This one alone medicine have I alwayes probed for the keeping in health of this cattell, to be most present & soveraigne: To preferre Health.

Take the berries of Juniper, beate them small, and sprinkle them with Dates and Salt, mingle them all together, and

For Lice.

give it your ~~sheape~~ thre or fourt times in the yere: for though they refuse to eate the Juniper berries of themselves, yet for the desse of the Salt and the Dates, they will easily take them all together. If they be lowrie, or full of Tickles, they vse to beate the rotes of Maple, and saething them in water, and opening the woff with their fingers, they poure the liquor, so as from the ridge of the backe, it run over the body. Others use the rote of Mandrake, being well ware that they suffer them not to taste it. If they have the Fever, you must let them blood in the hale, betwixt the two Clees, which the Poet teacheth, saying:

The Fever.

It easeth straight the flaming feavers paine,
If in the foote you strike the spinning veine.

The Fowle

Some let them blood under the ries, and some behind the eares. The fowle, a disease betwixt the Clees, is taken away with Latte, Allome, Brimstone, and Vineger, mingled together: or powder of Verdigrease put it. The swelling betwixt the two Clees, must be cut with great mariness, least you hap to cut the worme that lieth in it, for if you do, there commeth from her a hurtfull matter, that poisoneth the wound, and maketh it uncurable. Master Fitzherbert, a Gentleman of Northamptonshire, who was the first that attempted to write of Husbandry in England, appointeth this cure: his words be these. There be some ~~sheape~~ that have a worme in his fante, that maketh him to halt, take that shépe, and loke betwixt his Clees, and there you shall finde a little hole, as much as a great pins head, wherin groweth five or sixe blacke haies, like an inch long, or more: take a sharpe pointed knife, and slit the skinne a quarter of an inch long above the hole, and as much beneath; and putt thy one hand in the hollow of the fante, under the hinder Cle, and set thy thumbe above, almost at the slit, and thvess thy finger underneath forward, and with your other hand, take the blacke haies by the end, or with thy knifes point, and pulling the haies a little and a little, thvess after thy other hand, with thy finger and thy thumbe, and there

Worme in
the Foote.Master
Fitzherbert
for curing
of sheep.

there will come out a worme, like a piece of flesh, nere
as digge as a little finger: when it is out, put a little Tar
in the hole, and it will shortly mend. If they happen by
the extreme heat of the Sunne to fall downe, and to forsake
their meat, give them the iuice of the wilde Bete, and cause
them beside to eate the Bets. If they hardly draw their
breath, slit their eares, and let them bled. If they be trou-
bled with the Cough, Almonds beaten with Wine, & powred Thecough.
a pretie quantitie into their nothnals, remedieith them. A
Sheepe, or Swine, that hath the Murraine of the Lungs,
you shall holpe by thulsting through their eare, the rote of
Hettewort: this sickenesse doth commonly spring of want
and scarcitie of water, and therfore (in Summer time
specially) you must suffer no kunde of Cattell to want wa-
ter. Their legges, if they happen to be broken, are to bee
cured in like sorte as mens be, being wrapped first in woll
dipped in Oyle, and Wine, and afterward splented. The
young Lambes, and other Sheepe, also whiles they goe a-
broad, are troubled with scabs and manginess about their
lippes, which they get by feeding upon dewie grasse: the
remedie is Hysope and Salt, of each a like quantitie beaten
together, and their mouthes, their pallats, and their lippes
rubbed therwithall: the Ulcerous places must bee annointed
with Vineger, Tarre, and Swines grease. If they chance
to swell with eating of any Worme, or venomous grasse,
you shall let them bled in the veines about the lippes, and
under the tayle, and after powre into them Chamberlye.
If they happen to swallow a Horsleech, powre into them
strong and tart Vineger waeme, or Oyle. Against the
Murtion, or the Rot, I have seene given them, certayne
spownefulls of Brine, and after a little Tarre: this medi-
cine was used by Master John Franklinc of Chat in Brist,
who was in his life time a shiffull husband, and a god
housekeeper. In like sorte have I seene this medicin: Take
for every sorte, one penyworth of Triacle, and likewise one
little handfull of Hempsiede, ground Juie, Eldecleaves, and
Feathersew, as much as a Tennisball of Loame, and as
much Bay salt, put thereto Chamberlie, and a little Soote,
make

Contagion
from the
Suns heate.

The Mur-
raince of the
Lungs.

Broken-
bones.

Lambes.

Eating
Worms
or veno-
mous grasse.

Master
John Frank-
lin.

make it all luke-warme, and give to every one three spoonfulls good, and after every one a little Tarre, before they go out of hand. In some places they use to take the dried flowers of Wormewood, and mingling them with Salt, they give them to their sheepe, as a generall medicine against all diseases. This medicine is commended by Hieronimus Tragus, both for asswaging of any paine, and driving away any hurtfull disease from Cattell.

The Red
water.

The Red-water is a most poysonous disease in Sheepe, offending the heart, and is indeed as the Pestilence amongst other Cattell; therefore when you finde any of your Sheepe infected therewith, you shall first let him bleed in the foote betwix the Clees and also under the tayle, and then lay on the soze places Rewe and Wormewood beaten with Bay salt, and it helpeth.

The Wild-
fire.

This disease which is called the Wildefire is a verie infectious sicknesse, and will indanger the whole flocke; but howsooner incurable it is held, it is certaine that if you take Cheruile and stamping it with old Ale, make a Salve thereof and annoyst the soze therewith, it will kill the fire and set the Sheepe safe. And though some say this disease, bury the sick infected Sheepe alive with his heales upward before the Sheepe coate dore, yet this medicin hath bene ever found more effectuall and more agreeing with Reason.

Sore eies.

If your Sheepe have any imperfection in his eies, you shall drop the Juice of Helladine into them, or else take a lease of Ground Juie, and chawing it in your mouth spit the Juie into the Sheepe eye, and it is a present Remedy.

Of Taggd
or Belli.

A Sheepe is sayd to be Taggd or Belli, when by a continual sturke or running out of his ordure, he berayeth his tayle in such wise that through the heate of his dung it scaldeth and brædeth the scabbe therein; The Cure is, first with a payze of Sheares to cut away the Taggs, and to lay the soze bare, and raine, and then to throw earth-dryed upon it, and after that Tarre and Goose-grease must well together, then lastly to throw on more earth, and it is a present helpe.

The Poxe.

The Poxe in Sheepe are small red pimples, like Purple; rising

in the skinne, and they are very infectious; the Cure is to take Rosemarie and boyle the leaves in Vinegar, and bath the sores therewith, & it will heale them: change of Pasture is good for this disease, and you shall also separate the sick from the sound.

If an Ewe grow unnaturall and will not take her Lambe after she hath yeaned it, you shall take a little of the Cleane of the Ewe, which is the bed in which the Lambe lay, and force the Ewe to eate it or at least to chew it in her mouth, and shie will fall to love it naturally. But if an Ewe have cast her Lambe, and you would have her take to another Ewes Lambe, you shall take the Lambe that is dead, and with it rubb and daube the liue Lambe all over, and so put it to the Ewe, and she will take as naturally to it as if it were her owne.

Thus having shewed you these Cures, I will now give some
especiall precepts fit for every Shepheard, and so proceede to the
Goate; know then it is more for every Shepheard to under-
stand what fode is good for Sheepe, and what hurtfull, that
following the one and eschewing the other, he may ever keape
his Cattell in health. The Grasse which is most wholesome
for Sheepe is that which hath growing in it gud stoe of Apeli-
lot, Claver, Welse-heale, Cinquefoile, Broome, Prinpernell and
white Henbane. The grasse which is unwholesome for Sheepe is
that which hath growing amongst it Speare-wort, Peny-
grasse and any weed that growes from inundations or over-
flores of water, also Knotgrasse and Helldewd grasse.

Of all Rotts the hunger Rott is the worst, for it both putris-
eth the flesh and skinne, and is most incident to field Sheepe, for
to pasture Sheepe it never hapneth; The next rot is the Pelt-
rot which cometh by great stoe of Raine immediatly after the
Shearing, whiche Helldewing the skin corrupteth the flesh, and
this also is most incident to field Sheepe which want shelter.

There be little white Sonails (without shells) which a Sheepe
will like my, and they quickly eat them. There will grow upon
an Ewes teates little dry scabbs which will stop their milke
when the Lambes lacte, the Shepheard must have care to pull
them away. A Sheepe will have a Bladder of water under his
Ghose which the Shepheard must be easfull to let out & lance,
else the Sheepe will not prosper and be cured and healed by so-

Of unnatu-
rallness.

Precepts for
Shepheards.

It is not good to shear sheep before Midsummer, for the more he sweateth in his wool the better and more kindly it is.

If you will know the age of a shewe lode in his mouth, & when he is one shewe he will have two broad teeth before; when he is two shewe, he will have four broad teeth before, when he is three he will have sixe, and when he is four shewe he will have eight, & after those yates his mouth will begin to breake. Now touching the rule of euenesse and unevenesse of the mouth, it is uncertaine and faileth upon many occasions.

Goates.

Goates have many things common with sheep: for they go to Bucke at one time, and go as long with yong, as shewe do: they yeld commonerie with their flesh, their milk, their Chese their Skins, and their Haire: the Haire is profitable to make Ropes of, and Packes, and divers like instruments belonging to Seamen, by reason that it neither rots with moisture, nor is easily burnt with fire. Varro maketh mention of two sorts of them, a heare sort, & a smooth, such as have Clemes, or Clares, under their chynnes, are taken to be most fruitfull: their Woollers would be great, their Wilke thick, & the quantity much. The heare Goate would be softer hayzed, & longer, his Necke short, his Throat-holl deeper, his Legges fleshy, his Cates great and hanging: it is thought better to buy the whole flocke together, then to buy them severally. At the Chinne of every one of them hangeth a long beard, by which, if any man draw one of them out of the flocke, the whole flocke (as amazed) stand gaping upon him. The heare Goate, because of his beard, & as (Aelianus sayth) by a certaine instinct of Nature, preferring the male before the female, goeth alwayes before his woman. The bargaining for this Cattell, is not after the manner of bargaining for shewe: for no wise man wil promise that they be free from sicknesse, being as they be, never without the Ague: but he assuris them that they be wel to day, & can drinke. One thing is to be wondered at in this beast, that he draweth not his wine as all other beaults do at his Nose, but at his Cates. The best kinde of them, are those that bring forth thise a yare, and such you muste seek for your brewe. The Goate is able to engender at seven moneths old, being even as lecherous as may be: for while he is yet sucking, he will be upon the backe of his damme: and therfore be wery fearefullye

unstable before he be sixe yéeres olde, being now soke and conserued with his overtimely lustiness of his youth: and therefore after he come to be sixe yéeres old, he is no longer to serue your turne for bréde. The time when you shall suffer them to goe to rutte, is in Autumnne, a little before December, that at the commynge of the spryng, and blossoming of the trees, the yong may be brought forth. The Coate goeth with you g (as I said) syue moneths, as the Whiepe doth: she bringes forth com-monly two, and sometime syue (as Plinie witnesseth.) Such as beare twise, you must keepe for your stocke, for the tenning thereof, and the encrease. As touching their bréeding, you must in the ende of Autumnne sever your hee Coates. The young Coates of a yéere olde, and two yéeres, bring forth hiddes: but (as Columella saith) they are not to be suffered to bring them up, except they be thre yéeres old: and therefore you must away with the young, that the Coates of the fift yéere may bréde: and suffer the hidde of a two yéeres Damme, to sucke no longer then it is meete to bee solde. When the hiddes are brought forth, they must be brought up in like sort as I told you of the Lambes: sabyng that the wan-tomelle of the hidde is more to be restrained and hardier to be kept in, and must bee fedde beside their milke, with young bowes. Plinie affirmeth, that they be scarce god bréde at thre yéeres olde, but if they passe soure, they be sterke naught, and that they begin at seuen moneths, evyn while they be under the mothers breast. The fift riding pof-pereth not, the second is somewhat to the purpose, the third spiedeth, she bringes forth, till shé be eight yéeres olde, and therefore the she Coate, when they be above eight yéeres, is not to be kept: for shé then becommeth bataine. Those which want hornes, (as in the male kindes) of all others be the best: for the horned, by reason of their weapons are hurtfull and unruly. Besides, the female of such as lacke hornes, doe give alwaies greater plentie of milke: but Columella (as he commendeth the Pollardes in a temperate and milde Countrey) so in a boystorous and a stormie Region he would have them horned. Such as have hornes, doe shew their age by the circles of their hornes; it is thought, that they

they see as well by night, as by day, and that they alivates lay
their face a turne ad me from the other, & in that order also face.
Cold(as it is said)is very hurtfull to this kinde of Cattell, spe-
cially to those that be with yong, as likewise the extreme heat.
The wit of this beast Nurianus reporteth, he once had experiance
of, where as a couple of them chanced to mite upon a very long
and narrow bridge, and the straighntesse would not suffer them
to turne, and to go backward blindfold in such a straighnt,
considering the swistnesse of the streame under them, was more
impossible; the one of them lying downe, the other passed over his
body. Varro doth commend sundry little flockes kept severall,
rather then great flockes together, using for example one Gaber-
jus, because a great flocke is sooner subject to the Murraine,
thinking fistie to be enough for one flocke. Columella also affir-
meth, that there ought not to goe above one hundred of them to-
gether, where as of shope he alloweth a thousand in one flocke.
The biting or bruising of them, is poison to all kinde of Ceras,
& therefore were they in olde time sacrificed to Bacchus, because
they were so hurtfull to Vines. Their stables Columella would
have to stand upon a stony ground, or else to be paved, for this
beast needeth nothing under him but a few boughes. When he
lieth abroad, the Goat-heard must often swiープe, and make
cleane their houses, not suffering any dung, or moisture to
remaine in them, that may be hurtfull to the flocke: for as I
said before, they are seldom without feavers, and much
subject to the Pestilence. And whereas other Cattell, when
they have the Murraine amongst them, as soone as they be
infected, begin to languish, and pine away: only these Goates
as soone as they be taken, though they be never so lustrie to
luke upon, suddenly fall downe together, and die as thicke as
Haile: which disease doth chiesely happen, by too much ranke-
nesse of pasture. And therfore as soone as you perceiue one
or two of them fall downe, let the whole flocke blood with as
much speed as you may, and suffer them not to feed all the day,
but shut them up the fourre middle houres of the day. If they
be diseased with any other sicknesse, you must give them the
Rootes of Riedes, and of the great white Thistle, stamping
them with yron pestles, and strained with raine water let them
dinke

winke it : and if so be this medicins heale them not ; your holt will be to sell them, or to kill them, and powder them ; and when you buy new, bring them not home too hastly, till the disposition of the ayre be altered. If they fall feberally siche, cure them in such sort as you doe your sheepe. Florencius saith, if you stampe with water the guisaile of the Stocke, and give them to drinke a sponefull a peece, it preserueth both Sheepe & Goates from all murraine and pestilence.

Now seeing that of this Cattell whereof I have entreated, the profit of the Milke is not small, it is no great reason we shoulde overpassee the ordering of the same : soz Milke (as Varro saith) of all liquid things wherewith we feede, is the greatest nourisher. Milke differeth in godnesse according to the nature of the bodies that give it : as the Milke of Women, of Wine, Sheepe, Goates, Asles, Hares, and Cammels : the greatest nourisher is Womans Milke, the next Goates Milke, whereby the Poets faine, that their God Jupiter himselfe was nursed with Goates Milke : the sweetest next Womans Milke, is the Cammels Milke : the wholesomest is Illes Milke, the Asse as soone as she is with Colf, giveth milke : the Cow, never till she hath calued : most comfortable to the stomacke is Goats milke, because he rather fadeth on Wruts and Bowes, than upon Grasse. Cow Milke is most medicinable, and most of all loseth the belly. Sheepe Milke is sweeter, and nourisheth more, but is not so good for the stomacke, by reason it is fatter and grosser. All Milke that is milked in Spryng time, is watrigger then the milke of Sommer, as likewise is the milke of yong Cattell.

All milke generally (as Diocorides writeth) is of god nourishment, but filleth the stomacke and the belly with winde : that which is milked in the Spryng, is thinnest but loseth the belly most. The difference of milke, is taken (as Varro saith) of the pastures, the nature of the Cattell, and the milking. Of the pasture, when the cattell is fed with Barly-straw, and all other, hard and dry meates, and this greatly nourisheth. For purging of the belly, the grasse pastures, specially where the cattell feed of purging heartbes, as Cardanus in his booke de Plantis teacheth, that if you will purge Melancholy, you must side your milch Goate, or Asse, with Polipodi, and for all other humours

Sene,

Sene, for the Droppe with Spurge, or Agaricke: for cleasing of the
 bloud, with Fauintay, or Dappes: and if you will but onely loose
 the belly, with Mercury, or Phallowers: so farrre Cardanus. Our
 countreymen doe chieflye commende for milke, the pastures
 where groweth Sperry, and Claver-grasse, & that is all bedeckt
 with yellow flowers. For the Cattell, the difference is betwixt
 the sickes and the healthie, the young, and the olde: and for the
 milke, that is best that is not long kept after the milking, nor
 that is milked immediately upon the Caluning, a grosse un-
 wholesome kinde of Milke. To trie whether Milke be mingled
 or not, you shall take a Sharpe Rush, & putting it into the Milke,
 let it drop from thence upon your Haile, and if the drop runne
 abroade, it is a signe there is water in it: if it keepe together, it
 shewes it to be pure and good. Of Milke is made Butter, whose
 use (though it be chieflye at this day among the Flemings) is
 yet a good and profitable food in other Countries, and much
 used of our olde Fathers, yea even of the very Patriarches (as
 the Scriptures witnesseth.) The commoditie thereof, besides
 many other, is the allwaging of hunger, and the preseruing of
 Strength: it is made in this sort. The Milke, as storne as it is
 milked, is put out of the Paile into Bowles, or Pannes, the
 best are earthen Pannes, and those rather broad then deepe: this
 done, the second, or the third day, the creame that swimmes a-
 loft is skited off, & put into a vessell rather deepe then big, round
 and Cilinder fashion: although in some places, they have other
 kinde of Charmes, low and flat, wherein with osteh beating,
 moving up and downe, they so shake the Milke, as they leue the
 thinnest part off from the thicke, which at the first, gathers to
 gether in little crombles, and after with the continuance of the
 violent moving, commeth to a whole wedge, or cake: thus it is
 taken out, and either eaten fresh, or barrelled with salt. The
 Buttermilke that remaineth of the Butter, is eyther kept for
 the family, or given to Calues and Hoggis, as a dainty food.
 Cheese is also made of the Milke of Cattell, the Milke being
 poured into a Vessell of earth, putting into it a little rennet, the
 quantity of a Walnut, in a great vessell of Milke, whereby it
 runneth into Curds. Varro doth better like the Rennet of the
 Leuret, or the Kid, then the Lambes: howbeit we commonly

Butter.

Cheese.

use

as the Calves Kennet: others use sundrie other meaneas, anely with heate, breaming it in ~~Time~~ water, and after dipping those welles in cold water, in which is the swettest and neareallest manner: others put in the siefe of wilde spasson, and being so turned, the whey doth gretly purge cleame: others againe use the Milke of the Sisg tree, and then doth the Whey purge both choler and feare: some purge it with Drimell, or syroppe of Vineger, whiche is of all other wayes the wholesomest: some besides, use the little skinne of Birds Cuisards, and others, the floweres of wilde Thistles, or Hartichokes. The newer and better the Milke is, the better will be the Chese: so; made of two sortes of Milke, or Milke that is too neare salted, it sowne sowzeth, and wareth hard and naught, and is not so endure any while. Againe, being made of fat and new Milke, it will very long endure, and long continueth in his fathesse and softnesse: about a two o' thre hours after you haue put in your Kennet, the Milke commeth to a Curd, whiche is straight wayes put into forme, or Cheseفات, and pressed: or if they be but small, they are onely pressed with the hand. If they be of any quantity, they haue great waight upon them: it is very needfull you presse out the Whey with as much spred as you can, and to seuer it from the Curd, and not to let it lye slowly drayning of it selfe. Those that make great Cheses, have moulds for the purpose, and Waights and Presles ans. erable. After this, they take them out of the Presle, and lay them upon Herdels, or faire smooth Tables, in a shadowie and a cold place, and close from all windes, sprinceling them all over with salt, that they may sweate out all their sowzenesse, laying them so, as they touch not one the other. When they be now well hardened and thickned, they are taken up, and pressed againe, with great weights, and cubbed over with parched salt, and after layd in presse againe, whereby it is thought they will neither have eyes, nor be over dye: which faults hapneth to come when they be either not well pressed, or too much salted. Some use to put into the bottome of their Pailes, the gréne kernels of the Pine Apple, and milking into them, doe cause it so to turne. You may also cause your Chese to relish of whatsoeuer you will, as Pepper or any other Spice: but Columella counts that for the best Chese,

Cheese, that hath least mixtice in it. The strongest Cheese, and hardest of digestiōn, are those that are made of Buttles milke: wherē next are such as are made of the milke of Cives, but the mildest, and lightest of digestiōn, are those that are made of Coates milke: the Cheese that is made of Hares milke, is of the same qualitie that the Buttles Cheese is. There is Cheese also made of Cammels milke, and of Asses milke: the Cheeses that are made of Buttles milke, are at Rome, of all other cattell in greatest estimation. Such as are touched both above and beneath, and have more then soure Pappes, you can make no Cheese of their milke, so it will never Curd. In our daies, the best Cheeses are counted the Parmasines, made about the River of Po, esteemed for their greatnessse, and daintinessse, of which you shall have brought into other countries that weigh above threescore pound. Next are commended the Holland Cheese, the Cheese of Normandie, and the English Cheese. In England the best Cheese is the Cheshire, and the Shropshire, then the Banbury Cheese, next the Suffolke, and the Essex Cheese, and the very worst the Kentish Cheese.

¶ Of the whey which commeth from the Cheese is made certaine Curds which are called Whey Curds, & are made in this manner. They put the Whey into a Brass Kettle or Pan and set it over a soft fire, heating it till the satnesse of the Cheese swimmē aloft, then with a Dish they put new milke into the Whey, and presentlie you shall see the Curds swim aloft upon the Whey; which with a Skimmer you shall take and put into a cleane vessell, and so doe as long as you see the Curds arise, then when they cease, put in more new Milke and more Curds will arise, and thus do till the strenght of the Whey be spent. The old writers do teach the making of a kinde of white meat, not much unlike to Wheycurds, which they called Melcan, & made it in this sort. They put into a new earthen vessell Vineger, and suffered it to boyle softly upon the fire, till the vessell had drunke up the Vineger, and into that vessell they poured in Milke, and set it where it might stand stedfast, whereby they had within a while their desire. But me thinketh I have spoken enough of this subiect, I wil now procede to the nature & ordering of Swine which that it is a notable Creature belonging to husbandry, both
evidēntly,

Melcan.

Swine.

evidently appear by the saying of þ ancient husbards, counting him a foolfull & an unthriftie herbaud that bath his Bacon rather from the Butcher, than fro his owne Hosterie: there ariseth as great profit many times to us of our oon Swine, as doth to you that be keepers of greatest cattel of your flocks: so if Bacon be away, the chiese it supster of the Husbandmans hutchin is wanting. And whereas Swines selff smeth abominable to þ scollish Jewes, I beleue verily they never tasten the Gammons of France, so highly commended by Varro, Strabo, Atheneus and other learned writers: which I suppose were none other but the fitches of Celsophaly, so greatly esteemed at this day, not onely in Germany, but in Rome, & that they were called by the names of Celtick Gammons, because the old writers, especially þ Greeks called all Countries on this side the Alpes, both French and Dutch, by the name of Celtick, buredly there is no beast besides that makes more dainty dishes, there is in him nine fiftie different tastes, where every other beast hath but one, & herof cometh at the first the sharpe law of the Centaurs, forbidding it to be used at suppers, the Glodres, the Stones, the Stripes, and the forepart of the heads of Swine, (as Plinic witnesseth.) And most apparent it is, that not only the French, & the Dutch in those daies, but also the Italiens, and the Greeks, nourished great herds of Swine. Among the Greeks, Homer maketh mention of one, that had twelve hogslves, & every syue containing fiftie worklings, & Polybius witnesseth of more then a thousand to be ready at a time among the ancient Italiens, Lushans, & French. Varro accounteth a hundred but a smal herd, wherein so small numbers hogslves must have regard both to the fatenesse, & the age. Varro alreadie before the nature, the kind & the country. And because the yong do commonly resembled their parents, he would have you chose such as are faire, & large bodied, and which makes most to the matter, as fruitfull as may be: which Varro, hath chiefely shewen those that be of one colour, their bootties should be blachre & blachre, if it be in a colde countrey: if in a temperate, you may mouche the smooth. Their proportion should be long, large booted, & boaled, wide buttocked, shart legged, & scote, big necked, & nech balauned, shart grained, a turnyng upward, his taile be whise, whose kynde is most communit, that bringeth many Pigs, the country that speedeth

is exceeding large and great; the best age for the Boare, is a yere old, though at halfe a yere old they are able to serve a boar: one Boare is enough for ten boars, & more. The boar is sufficient to bring Pigs at a yere old, & so for seuen yere after; the fentfuller she is, the sooner she maye shew at the first farrowing, you shall easly se what number she will bring forth: she will not much differ in the other. The best kinds of Boares have the litle pappes, the commone do: not so many. Every Pigge both know his own Pap that he was borne by, and sucketh only that, & none other: if you take away the Pig, the Pap dieth, as both Plinie, & experience sheweth. They were wont to be bought and bargained for in this sort. Doe you warrant that these Boare are sound, that I shall well enjoy them, that you will answer the faults, & that they be of a healthy brade? A wet moorth ground, to missest for this Cattell, for he delighteth not in water, but in dust and myre, so much (as Varro witteth,) that the Wolfe, as soon as he hath caught a Boare, draggeth her to the water, because bastards are not able to abide the heat of hot flesh. And although this beast will away with any ground, (for he feedeth both in mountaines, champion, & marsh,) yet his chiese delight is in the meads that is full of quagnires, where there groweth Sowes of Oke, Cote, Witch, Mallowholt, wilde Dives, wilde Dates, Pastinaces, Cumbries, Plome trees, and Cherie trees: for their besse fruit at divers times, and seld the Heards almost all the whole yere. Wherof a Partish is to be preferset before a yere ground, that they may maner in the marsh, dig up wormes, shallots in the myre, & fumble in the poules of water, which in summer is most necessarie. They also hunt after rootes, specially fern-rootes, & the routes of Muldrishes, Knives, & Fedges, beside good grasse to satiate a Boare, & Richards of Cherries, Idemus Apples, & plutes notwithstanding all this, the Boare, for you will see them dron by hand, when meate failes abroad, and they haue no maner place of肉食, in Calvines in the winter, or boars upon fynesse foyres, alle Meates, pease, & Caces will delight them, but not so much as Davies spiced for this kinde of feeding both maketh them fatte, and not onely fatten them but also maketh them fatte. But the Davies and the Xerxes are verye unto goling Boare gree foyre or tyme, as
dissend
from

entreating of Carell.

from the first, Whay, Butterwikk, washynge of Milchesolles and milchesolles with other swillings from the other, Cratnes and drasse, washynge of Hogsheads, Turnes and Brewhing betwix, Brann, Chysell and suchlike.

When they are yet yong, clucke both they & their Dams must be well fed, they must be put to soote early in the morrow, above the heat of the Sun, & after kept in shadowy places, where there is god stoe of water. If soe they goe to pasture, they must be meocyned, lest the grasse scower them too much, by which they will be greatly weakenyd. In Winter they must not be put abroad, till the frost be off the ground, and the Ice thawed. And though the Swine wil runne at the known boice of the Swine-heare, yet Varro will have them bydght both to pasture, and homeward, with the sound of a horneth their meate must be given them scattered thin, so shall both lesse suffice, & the greater shall not harme the smaller: as soone as they heare the boice, though they be never so far off in the Woods, they come running with al hastie. Polybius telleteth, that the Itallians use not to follow their beards, as the Crackes and others doe, but going a prettie way before them, they blow their hornes, their beards being aquainted with the blast, do follow them in great order. They do so well know and obey the call of the Swineheare (if we may beleive Alianus,) that when certayne Robers, lancing upon the Count of Tuskan, and taking great numbers of them out of their Woods, carried them aboard, the theebes having weighed up their Brisket, and being under sayle, the Swine upon the hearing of their keepers boice, suddenly ran to the ondes of the shipp, overthrew her, wherby (the Pirates sayd,) the Swine came safe to land to their Masters. As I have here told you of the corisitions of the Boare and the Hote, and of their hysping, so will I now shew you the manner of their brewhynge: The Brewhyngh time is reckoned to be from Winter, till the twelvth of March, so shall you haue them to farron in Summer: for the Hote going soure moneths with pigges, fartsweete in the mornynge, whic is with Pigge at the first brewhynge, but they use to let them gye often to Boare, because, they sone miscarrie: if you will haue two fartsives in one yere, you must put your Hote to Boare in Februario, or Januari, that the may farron in Apill or May,

A wonderfull
knowles
edge in
Swine.

when as there is good pasture abroad, and swylke is in his chiefe strength: & when they be weaned, they may wel fee de upō straw, & grottes: & after the Wooll may farrow again in the end of Autumne: soz Varro saith, her farrowing times are so diuided for the nonce, as she may farrow twise a yere, while she hath fourte moneths to beare them, & two to feide them. As soone as they be with pigge, you must keepe the Woare from them: soz with his iuuinelle, he maketh them to cast. Yong Swine soz br̄de, must not be lesse then a yere old, as Varro would have it: holdeþt they begin at eight moneths, and continue seuen yeres. The Woare beginneth at eight moneths, oþ sise, and continueth well four yeres, and after, at thre oþ four yeres old you may geld them, and sat them. Some would not have you keepe up aboue eight, others not above sise: not that the Wooll is able to keepe no more, but that she that kappeth more, soone fayleth. Varro reporteth, that the Woole of Æneas Lavinus, farrowed at one time thirtie white Piggis: but it is monstrosous when she farroweth more then she hath paps. Every Woole must have her fatis by her selfe when she hath farrowed, and not suffered to goe with the whole Heard, as other cattell are, but little Cotes to be made soz them, wherein they may be kept either farrowing, oþ with farrow: soz Swine, if they lye together in any number, being commonly ill mannered, doe lye one upon another, whereby they hurt such as are with pig. And therefore you must haue severall fatis where they may farrow, & made high, that the Wooll cannot get out: soz covered they must not be by any meanes, that the Swineheard may iooke that the Woolls overlay none of them, & to sic what they want, that he may make them cleane, and as oft as he cleaseth it, he must strewe sand, or such like, to drye up the moysture: for though she be but a swinish creature, yet lovethe she to haue her chamber cleane. When she hath farrowed, she requireth greater quantitie of meate, whereby she may give the more milk, specially Marley steeped in water, & ground, & tempered with water. And if you haue not good store of meate, your best is to sell the Piggis: so shall the Dam, being delivred of her burden, be sooner with farcom again. Such as are farrowed in winter, are commonly poore & wretched, both because of the cold, & that their Dams do not like them soz wanting.

ting of milk, & biting their Pappes. If the Hoin eat her Pigs it is no wonder: for Swine of all other beasts, can walke away with hunger, which when it provoketh, they eate not only their stone. but yong children, which not long since happened in Frouster, to A Childe
the pittifull d^r. cōfōrt of the Parent. They suffer not the Hoin to eate by a
go abroad in ten dayes after her farrowing, except it be to drinke: Sowē.
after, they suffer her to goe about the house, that she may g^t better
give milke. When the pigs were great, they desire to go abroad
with their Dams, at which time they are fed by themselves a-
part, to the end they may the sooner forget their mother, which
they will do in ten daies. It behoveth y^r Swineheard to be care-
ful and diligent about his charge, that he have in memory every
one of them, both old & yong, that he consider every saccow, & shut
up those that be great with pig, y^r they may sacrow in thair syre.
He must have special regard of every yong pig, that every one of
them be brought up under his own dam: so if they get out of the
tie, they straightwaires mingle one company with another, wher-
by the poore hōme is forced to gide milke many times to more
pigs then he aboue: therefore y^r Swineheard must shut up every
dam with her swine pigs. And if his memory serue not to know
them all, let him pitch ebery hōme and her pigs with a severall
marke: so in a great number it shal behove him so to do, for ob-
founding his memory. The old husbandmen observed alwayes two
times in the yere for cutting of them, y^r Spring, & the fall of the
leaste, whereby they avoided the dager both of th^r heat & cold. The
Matre pigs they cut when they were six Moneths old & again at
souce yere old, to make them sat, making two wounds, & taking
out the stome of ebery ther myells. when you haue taken out one
stome, you must thrust your knife again into the bound, and cut-
ting a funder the skinne betwixt the stomes, draw out with your
fingers the other, so shall you make but one scarre: but this kinde
of cutting is somewhat more dangerous. The Hōmes are spain
by burning the Matre with an Iron, and the scarre healeth up,
whereby they will both haue no more pigs, and be the fatter.
Aristotle, and following him Plinius, would haue the Hōmes after
two dayes satting, hanged up by the soare legges, and so cut,
whereby she will be the sooner sat: but I judge it better to cut
them when they be yong, at two Moneths old, or younger, for

So are they in least lespacie. After they be cut, you must kepe them from wyrke, and give them but little meate : the wound will be araygated with fresh Butter, and sovred up. As the iuytting and turning up of the taile is a signe of a sound Hog, so be there certaine and assured signes of their sicknesse : for if you plucke off the hysties from the backe, and finde that their rootes haue bloud in them, it shewes the Swyne is not wel. Besides, if your Hoggess be sicke, or taken with a Fever, they hang their heads at one syde, and subueniently as they runne abroad, they stay, and being taken with a burning giddiness they fall downe : & therfore you must marke well on which syde they hang their heads, that you may cut the eare of the contrarie syde to let them bloud : and under the sayle beside, two inches from the rumpe, you shall strike the veine, which there is easly to be seene, by the bignesse of it : you must first beate it with a little sticke, and after it swelleth with the beating, open it with your knife, and having bled sufficienly, binde it up with the vnde of Willow or Elme : after this, kepe them up in the house a day or two, and give them warme water, with a good quantite of Barley-sowze. If the Quinsay or Vuuls, (to which disease this beast is wonderous subiect) chance to take them, Didymus would haue you let them blowe behinde about the shoulders, others woulde haue their tongue : some againe cure them with scuttering. If the kernels swell in the throat, you must let them blowe under the tongue, & when they haue bled, rub their mouthes within with salt, finely beaten, and wheate sowze : Democritus would haue you give to every Swyne, thre pounds weight of the beaten roote of Daffadill. If they vomit, and loath their meate, it is good to gite them before they goe abroad, the shavings of Ibrie, frysed with salt, and ground Weanes. Swyne while they siede abroad, by reason of their great denuring (for it is an unsatiable beast) doe wonderously labour with the abundance of the Sphynx : for remedie whereof, you shall give them water as oft as they drinke, in Tonghes made of Lamartice, the juice of which wood is very holesome for them. Democritus teacheth to gibe unto Hoggess that haue the Sphynx, the water wherin the Coales of Yealath hath beene quenched. This beast hath sometimes a sicknesse wherein he pines away, and soylaketh his meate : and

Of diseases
in Swine,
and the
cure.

The Quin-
say.

Kernells.

Vomit.

Sphynx.

Cheaz.

if you bring him to the field, he suddenly falleth before, and lyeth as it were in a dead sleep; which as soone as you perceive, you shall shut up the wholle Heard in some house, and make them to fast one day, both from water and meate: the next day the teste of the iude Cucumber stamped, and strained with water, is given them to drinke: which as soone as they haue taken, they fall a vomiting, and so purge themselves. When they haue thus expellid their choler, you shall giue them hard Beanes, strained with Wine. An excellent medicine against all infestacion of Polisse. Wine, both Hieronimus Tragus teach, which is, when you see them infested, to giue them the Rates of Polipodi, or Oxe Fern boyled in Wine, whereby they shall purge whatsoeuer is evill from them, and most of all choler, wherewith Wine are most troubled. Wher as thicke in Sommer is buttfull and dangerous to all kinde of Cattel, to this beast it is most hurtful: and therefore you must not water them as you doe to hogs and Goates, but thrise, or thrise a day: but if you can, you must kepe them by the water side, that they may gae thereto at pleasure: for the Swine is not content with drinking, but haue much often sole & plunge his stilly punch in the water, neither delighteth he in any thing so much, as to wallow in the durt. And if you haue no such place wiere, you must draw some water from the well, and giue it them in troughs abundantly: for except they drinke their fill, they will fall sicke of the Lungs: which disease is cures (as Colomella writeth) by thralling the rate of Butterworth through their ears: Pliny affirmeth the Code to be a present remedie for the sickeresse of Swine. Some say, that if a swine losse one of her eyes, she dyeth soone after: others, wile the lifeth fifteen years. There is a kinde of disease amongst Swine (though otherwise they be healthie and fat) wherein their flesh is all infected with little graines, as big as Peason: the Greckes call them Galazos, and iuer at this day speareld Wine, whiche you shall soone perceiue by the sight of the tongue, and the horrenesse of their booyce: this disease they say, is naturall unto them, from which you shall preserue them, if you myle certaine plates of Lead in the bottome of their Trough. You shall also kepe them from this disease if you giue them to drinke the Morte of Bayony: the generall and common
Lung;
Mealed
Swine.

temedy is Allorne, Wyntstone, and Bay-betties, of each a like
anne thereunto a handfull of Rose, beate them all together, and
put them in a Bagge, which Bagge you shall cast into their
water when they drinke, and renew it twise in the yere.

⁶⁷
Hidden
sicknesse.

If you finde in your Swyne any sooteane or hidden sicknesse, the
only generall, most certayne & usuall helpe for the same, is first
to let him blood under his Tayle, and under his eares, and if they
bleeue not fleschly enough, you shall beate them with a small
biche, and that will bring forth the bloud; then wap about the
soxe a the bark of a young Osier, and then keepe him warme and
give him to drinke warme whey, well mixt with Barley,
meale and Medoaker in powder.

The Gall.
⁶⁸
The Gall is a disease amonst Swyne, because that choler is
poterfull in them, which you shall know by a swelling which
will arise under their lasses; & the Cure is to stamp Colwode
and Saffron, and mixt it with Honey and water, and then strai-
ning it give it the Swyne to drinke by a pinte at a time.

⁶⁹
The sleeping
evill.
The sleeping
evill.

Swyne are much subject to the sleeping evill in the sommer
time, & you shall know it by their continual sleeping & negleting
their meate: The Cure is to huse them up, and keepe them
fasting fourteene hours, then in the morining when
unger pincheth them, to give them to drinke swyllings
warme, in which is stampt good sorte of soutercapp, which
actions as he hath dranke he will vomit and cast, and it is a
present temedy.

⁷⁰
The Pox.
The Pox is an infectious disease in Swyne, and proceedeth
from corrupt blood engendred by poterlie, wet lying, Lousiness
and such like, and the Swyne can never prosper which hath
them. The Cure is to give him sick to drinke two spoonfuls of
Screachie, in a pint of Yonge water, which will expell the in-
fection outwardly, then to anoynt the soxes, with Wyntstone and
Boares grasse, boyled together & to separate the sick from the
sound. Touching the fielding of Swyne, you shal easly (though
it doo be wanting) finde Boernes, Marches, and Coome fields to
ke be Swyne in. They will be fat (as I have supposed) in thre
score dayes specially if they be kept from meat thre daies before
you sick them: they are fattened with Barley, Dates, or other
Cayne, or Pulles, either given whole, or grana, but of all others,

⁷¹
Farding
Swyne.

hest with spast: and that flesh is better, and of more substance that is fed with acornes, then that which is fatten'd with either Beech mast, or Chestnut. This beast will in time be so fat, as he will be able neither to goe, nor stand. *Pea Varro* tells that there was sent in Arcadia a sow so fat, that she was not only unable to rise, but suffered a spouse to make a nest in her body, and to lay her young there. The same Varro reporteth, that there was sent to Volumius a Senator in Rome, a piece of swine of two ribs that weighed thirtie and twenty pound: the thickness of which swine from the skinne to the ribbe, was one fote and three inches. Your best is to put to fatten your swine of two or three yeares old: for if they be younger, their growing will hinder their feeding.

These are the opinions of the Ancients, but to come to the true and perfect order of feeding of swine, it must be according to the Country wherein you live, as if you live in the Country which is Wallarie, where soone of spast is, then the mast is a sufficient feeding, and will make them fat in sixe or seven weekes; then having got flesh and fattenesse bring them home and for ten dayes or a fortnight, siede them with dry Pease or Beanes, and plentie of water, and it will so harden their flesh and fat that it will not consume when it comes to boylng.

If you live in a champaigne Countrey which is farre frome woods, then stye up your fattenings & let them not ranage abroad but have their stoe, & water brought unto them till they be fat: now the first two daies after their putting up, give them nothing, the third day early in the morning give them a prettie quantity of dry Pease & Beanes, at none give them as much more, at four a clock as much more, & when you go to bed as much more, but all that day no water. The next day you shall siede them againe at the same houres and set water by them, that they may drinke at their owne pleasures: twice or thrice a wake as your provision will serue you, it is good to fill their bellies with Choute Wallay, Buttermilke or iardeine wash, but by no means scant their proportion of Pease and Beanes, and thus you may siede a swine fat enough for slaughter, in a moneth or two bches.

There is another way of feeding in Champion countries & that is at the rate of stacke of Pease & Beanes, which Racks must

The best
way of
feeding.

be

be placed whether at home or in the field, neare to some water, no matter how mirely or filthy soever, and these Ricks are to be cut downe by small degrees, and the Swines Morning, Noone and night cast amongst the Swine; This manner of feeding is best for young swynets, but generally for all sorts of Swine, you may amongst these Swines sene Shepe also, and it is an excellent husbandry, for so you shall not lose a Pease, the rasing of the Swine gathering whatsover the Shepe scattereth. There is another manner of feeding of Swine, for such as live in great Spacel Lokes, and about Cities where Graine and Pulse is scarce; and though the Bacon be not the best, yet it is tollerable, the manner thereof is thus. They first dry up their Swine, and then take Chandlers Cradnes (which are the veggys and offall of rendred Callof) as hard skinnes, bellies, and fleshy lumps which will not melt, and mixing it with warme wash give it the Swine to eate, this or four times a day, and it will sodainely putt him up with fatnesse; then besow upon every Swine a bushell of drye Pease and Beanes to harden his flesh, and then you may kill them at your pleasure.

Lastly, if you will sive a Swine for Larke, or a Boarre for Braine, you shall the first weekke give them only sodden Barley with plentie of water, whey, or Buttermilke, at such times as was formerlie shewed, then after you shall sive them bothe rawe Maule from the floor, before it be dyed, till you finde them of sufficient fatnesse, then for a weekke after give them drye Pease and Beanes to harden their fatnesse. It is good to give them sometimes to drinke the washings of Hogsheads and Ale Battels, & at all times to let them haue store of water. Now for their leare or lodging, let the Braine lye Franken on the bare Boords or paved Stones, and the Hogge liberally littered. This manner of feeding makes the whitest fattest and best flesh that may be. To keape your Bacon any long time you must use great diligence in the salting and drying of it, whereby you shall haue it both the wholesomer, and fatter, and besides to continue divers yeres to serue the turne, if carrie happen.

Your Dogges being in this last fatten, you must spit up, and not suffer

suffer him to drinke the day before you kill him, whereby the flesh will be the drier. When you have thus after his thicke killed him, you shall either skald him with water, or with a flame made with straws, or stickes syndge him : so the manner of such as slay him, I like not. After that, hanging him up by the heles, you shall plucke out his bowels, and put them to dressing : his flesh being colde and hard, you shall lay upon a table, and cut him into fletches, powder them with salt, thinning great store thereof in every place, specially where the bones be : that done, put it into your pouding tubbe, streynging salt enough under it : some would have you salt it in the wane of the sproune. Before you powder it, you must presse and drye out all the bloud, and the water. Some before they salt it, doe plucke out the bones, thinking it the best way for preserving it, and to keepe it longest sweet. Others againe doe not straight awaye put it into the pouding tubbe, but doe leaue it upon a Table for ten dayes after, and then hang it up in a pure ayre, to drye in the larde. And when it hath bene ayen in the larde certaine dayes, by little and little, they let the smoke come to it, and afterwards more abundantly. The Bacon will be the fester, if beside the smoke, the winde may come to it : if you hang it in great smoke at the first, it will be tuffis.

Having thus spoken sufficiently, of all the Cattell that are usefull and familiar with man and serue to sustaine both him and his familie, I will now speake something of Doggs and their uses so farre as they are profitable to every god husbandman.

The Dogge (though the Lawyer alloweth him not in the number of Cattell) and though he yealds of himselfe no profit, yet is he as the shepheard, (for his trustinessse, and watching of the flocke) to be esteemed and set by : for they have bene sien to fight in the defence and quartell of their Master. Yea, divers of them have bene knowne after their Masters death, upon great affliction and loue, to famili shew themselves, whereupon the pice of god Dogges greyn to be very great. It is written, that Alcibiades gaue for one Dogge eightscore poundes. There is not a more necessary creature then the Dog about Husbandry : for beside his singular faithfulnessse and watching in the night time, he is also a quarter master in keping of Cattell, and very neafull

Doggess.

nedfull for the defence of them, specially shipe & goates, which would be fone destroyed by wilde beasts, Foxes, Crayves, and other vermine, if dogs were not set to be their keepers. Swine feeding in heardes, if the wilde beasts invade them, making as it were a lacum with their grunting, and crying, assemble themselues, in their owne defence. The greater Cattell defend themselves some with their heales, some with their Hornes, onely the swye shape hath no souldier but the Dogge. Of Dogges that serven for profit, there are but three sortes: for the fourth (which are but for pleasure) I make no account. One of the sortes is such, as by scent, or swiftnesse, serue for the chase, and killing of wilde beasts: these, what manner of ones they shoule be, and how they shoule be ordered, Xenophon and Oppianus, in their Cynickes haue taught, and I in my last booke, where I shall speake of hunting, will declare.

The Banes
Dog for
the house.

But now I will onely speake of Dogges for the husbands, and keepers both of the house and Cattell: and first the Mastie that kepereth the house: for this purpose you must provide you such a one, as hath a large and a mighty body, a great and a shill voyce, that both with his barking he may discover, and with his sight dismay the Thiefe, yea, being not stene, with the horrore of his voice put him to flight: His stature must neither be long nor short, but well set, his head great, his eyes sharpe, and fiery, either brown or gray, his lippes blackish, neither turning up, nor hanging too much downe, his mouth blacke and wide, his neather-tawe fat, and comming out of it on either side a fang, appearing more outward then his other teeth, his upper teeth even with his neather, not hanging too much over, sharpe, and hidden with his lippes: his countenance like a Lion, his bell great, and shaghayd, his shoulders broad, his legges bigge, his tayle short, his feete very great, his disposition must neither be too gentle, nor too curst, that he neither fassone upon a thiefe, nor smite upon his friends, very wakynge, no gauze abroad, nor lavish of his mouth, barking without cause, neither maketh it any matter though he be not swift: so he is but to fight at home, and to give warning of the enemie.

The Shep-
beards dog. The Dwyng that is for the sole, must neither be so gaunte, nor
so swift as the Grayhounds, nor so fat nor heavy as the Masties of

the house, but very strong, and able to fight and folloe the chase, that he may be able to beate away the Wylfis or other beasts, and to follow the thise and recover the pray, and therfore his body would rather be long then short and thicke: in all other points he must agree with the Bandog. Touching the hinde, the Dogge is thought better then the Witch, because of the trouble she bringeth when she is salote: howbeit, the spayd Witches doe bite the sorest, and are more iawking. For their age, they must neither be whelpes, nor too old: for the whelpe can neither defend himselfe, nor the flocke, whereas yet the old hath some bse about a house. If you haue a whelpe (which age is better to be trained, either for the house or the fole) you shall perceiue by the sot whether he will be great or no. His head must be great, smooth, and full of veines, his eares great, and hanging, his iognata long, his sozlegs shorster then his hinder, but ry streight and great, his claires wide, his nailes hard, his heele neither fleshy nor to hard, the ridge of his backe not too much appearing, nor crooked, his ribs round and well knit, his shoulde points well distant, his buttockes fat, and broad, and in all other parts (as I sain) of the Bandogge before. For his colour it maketh no great matter, though Varro would haue him white, and so would Columella the Dog for the field, as he would haue the House-dog to be blacke: but the yped colour is judged naught in them both. The white they command, because he may be discerned from the Wylfis in the night, where, by they shall not strike the Dogge in stead of the Wylfis. The blacke againe, so the house is best commended, because of his terror to the thise in the day, and the hurt that he may doe by night, by reason of his not being sene: the dunne, the wimbed, and the red, doe not mislike me, so they be well marked beside. Thus must you judging him as a Lyon by the claw, eyther buy one, or bring up one for your purpose. How much teaching or bringing up prevaileth, appeareth by Lycurgus his example in Xenophon. To make them fierce and curst, you must plucke them by the eares, set them together with your handes, and keepe them from being hurt, so shall you haue them the bolder and the fiercer, and such as will never give it over. You must use him first to the chaine, by tying him to a clogge, letting him draine

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beards dog, folswist as the Grayhoun, nor so fat nor heavy as the Mastis of

the house, but very strong, and able to fight and folloe the chase, that he may be able to beate away the ~~Wolfe~~ or other beasts, and to follow the thise and recover the prey, and therfore his body would rather be long then short and thicke : in all other points he must agree with the Bandog. Touching the kynde, the Dogge is thought better then the Witch, because of the trouble she bringeth when she is salote : howbeit, the spayd Witches doe bite the soyle, and are more laking. For their age, they must neither be whelpes, nor too old : for the whelpe can neither defend himselfe, nor the stocke, whereas yet the old hath some vse about a house. If you haue a whelpe (which age is better to be trained, either for the house or the fold) you shall perceiue by the foot whether he will be great or no. His head must be great, smooth, and full of veines, his eares great, and hanging, his legges long, his footeleggs shorter then his hinder, but ry streight and great, his claires wide, his nates hard, his hele neither fleshy nor too hard, the ridge of his backe not too much appearing, nor crooked, his ribs round and well knit, his shoulde points well distant, his buttockes fat, and broad, and in all other parts (as I said) of the Bandogge before. For his colour it maketh no great matter, though Varro would haue him white, and so would Columella the Dog for the field, as he would haue the House-dog to be blacke : but the pyed colour is judged naught in them both. The white they command, because he may be discerned from the ~~Wolfe~~ in the night, where by they shall not strike the Dogge in stead of the ~~Wolfe~~. The blacke againe, for the house is best commended, because of his terror to the thise in the day, and the hurt that he may doe by night, by reason of his not being scene : the dunne, the wimbed, and the red, doe not mislike me, so they be well marked beside. Thus must you judging him as a Lyon by the claw, either buy one, or bring up one for your purpose. How much teaching or bringing up prevaileth, appeareth by Lycurgus his example in Xenophon. To make them fierce and curst, you must plucke them by the eares, set them together with your handes, and keape them from being hurt, so shall you haue them the bolder armes, and such as will never give it over. You must use hirn first to the chaine, by tyng hym to a clogge, letting hym draine

If it white by his necke, and when you have a little space vnde him in this sort, then may you ryther leade him or tye him; it is best to haue them tyed in the day time, to make them the emuler, and to let them loose in the night time: so shall they in the night time watch, and in the day sleep. To arm them agaist the Wolfe, or other wilde beastes, you may put broade collars about their neckes of Ralles, and iron baddes, lining it with soft leather within. You must looke that your Dogges be of a god kinde, and (if you can) all of one kinde, so shall they sticke the better together: choose them that haue the certyn Damnes, and such as haue their Dappes even. They begin to litter at a yere old, and continue nine yeres, after ferme they be worth nothing.

The Dogge (as Columella saith) gettes Whelpes lustily, till he be tenne yeres olde: the Whelpes of the olde Cuttes are bold and naught. Homer semeth to make the life of a Dogge above twenty yeres, whens he speaketh of the conuining home of Ulisses, and the knowledge of his Dogge: And I my selfe haue seene Dogges that were said to be so much, but altogether imposseable. Their age may be knownen by their teeth, the young having (as Aristotle saith) white teeth and sharpe: the olde blacke and blunt. In the Spring they begin to be fatte, and goe wylly Whelpe (as Aristotle and Xenophon saith) thre, score dayes, or at the most thyscore and three. Varro wryteth, that they goe thre moneths with young: the Dogs of Lazemon engender at eight moneths olde, and all other Dogges als at halfe a yere: they are with whelps with once liming: they litter about June: when they be littered, they are blinde, and the more milke they haue, the longer it is before they see, but never longer then one and twentie dayes, nor sooner then seaven daies. Some holde opinion, that if there be but one at a litter it will sic the ninth day, if two, the tenth day, and so abay added so as many as be, and that those that be of the first litter, dos sonest sic: the best of the litter is that which last steech, of which the Witch first carrieth to her kennell.

As soone as they be whelpes, cast away such as you mislike of seaven, keepe thair or fourte of thair, if two: while they be young, at the first they must be suffered to play with the dam, that they may grov-

gues the better; afterward, let them be taught, and tyed (as I tol you) tying them in the day, and letting them loose in the night, and such as you know to be of good hinde, and mould have them prove well, suffer them not to sucke a strange hamme: for the milke and bicon of the mother is of great force to the godnesse and growth of the Cattelpe. And if so be the Witch lache milke, suckle them with the milke of a Goate, till they be four moneths olde. Lay underneath them in their kennels straw and Chasse that they may lye warme: for they cannot well aby with cold. You must cut the tailis of the Cattelpe when they be sixe wickes old, in this manner: there is a sinewe that comes from the ridge of the backe, to the tip of the taile, which being held fast with a pincer, and a little sawme out, you shall cut alunder, whereby neyther the taile shall grow to any soule length, nor the Dogge shall at any time after (as they say) be mad. They are thought to lift up the legges when they pisso, at six moneths olde, which is a signe of the perfectnesse of their strength. The feeding of both kinde is all one, they may be fed with bones, porredge, and such like: in any wise let them want no meate, for if they doe, they will for hunger taken a boord, and forsake both the house and the flocke. Xenophon would have you give them milke all the yere long, and such fode as they shall sade with all their life time, and no other thing: if you feed them too full, it will breed (as he saith) diseases in their legges, and rot them within. Bread is their common meate, but Varro would have it given eyneth with spilles of Whey, by his iuris, they will never forsake their Cattell. You may give them beffre, breas, with the boord of sooren bones, and the bones themselves breas, which will make their teeth the sounder, and their mouthes and lynes whiter, and they will be the kioner, by reason of the sweetnesse of the marrow. You must beware they eate no dead shape, lete by reason of the taile, they fall to the like ones. Whyle the Witch hath Cattelpe, you must feed her rather with Barley bread then Wheaten bread: for they prosper better with it, and makes them give more milke. You must feed them thrise day, in the moring when you tye them up, at noon, and againe at night, when you let them loose. Their names that you give them

Fit names
of Dogges.

them, must be short, that they may soone heare when they bee called. The Grekes and the Latines, gave them names of two syllable, the Germanes lightly but one syllable, as Wall, solut, Patch, Grim, &c. The diseases and grievances of Dogges, are the biting of flies, Tickes, and Manginess. Against this you must wash them when they bee whelpes, with bitter Almonds, stamped and strained with water, washing them both about their eares, and betwixt their claves, that neither flies sticke to them and blister them, nor Tickes, or Lice molest them: and if they be already mangie, you must annoint them with Tarre, and Hoggesgrease: the Tickes also, if you touch them with this medicine, will presently fall off, for you must not plucke them off by force. If your Dogge be full of Fleas, the remedy is Cummin beaten, with a like quantity of nestling powder, and mingled with water, rub him over with it, or the olde eggs of oyle tubbed over all his body. If he be scabby, take Cychis, and Cefamum, beat them together, & mingling them with Tarre, annoint the soare: this medicine will also remedy a Christian creature. They say also, that if you thrust the skinne through with an iron, it will heale the manginess, or if you smere them over with Gunpowder, or cast them into a Tanners satte.

Aristotle wryteth, that Dogges are chiesely troubled with thre diseases, Madnesse, Quinsey, and the Gout, and whatsoever he biteth in his madnesse, becommeth also mad, and dyeth thereof: the madnesse is most extreame in the Dogge dayes: whatsover is bitten by them, falleth straightwayes into a loathing, and feare of water. To preserue them from it, you must mingle with their meate for thirty dayes together, or if they be already infected, give them nestling powder to eat. Pliny wryteth, that there is in the tongue of Dogges a little worme, called of the Grekes Lyria, which if it bee taken out while they bee whelpes, they will neither be mad, nor greevy, nor rabidous. If the Dogge be madde, he refuseth both meate and drinke, and dydeth ill savoured somy matter, both from his nose, & mouth, he looketh with a loathsome countenance, his body is leane, and more clong together than it was wont to be, he beareth his taile betwixt his legges, & biteth without any barking whatsoever he

Mad Dog.

he maketh falling as well upon men, as beasts, making no difference betwixt his friends, & strangers. As the Dog is a watchman and keeper of the house and the flocke, so the Cat is a household servant to be cherished.

The Egyptians for their profitableness, did worship for their God a golden Cat; so, wheras Rats and Mice, as well in Cities, as in Oranges, are greatly hurtfull, we keape up Cattes for the aboyding of the mischiese, neither is there a spedier remedie. The Cat is a beast of nature enemie to the Mouse, watching in the night, and sleeping in the day, stealing suddenly and swiftly upon the Mouse: she sith better by night then by day (as Alexander Aphrodiseus writeth) her eyes shine and glister in the darke. They goe a Catte-walling about February, or other times in the yere (for they often ingender) and bring forth their yong ones blinde, as the Witch doth. Herodocus saith, that after the Catte hath kinched, shee commeth no more at the Bucke, which when he perceibeth, and cannot have his purpose, he killeth the young, whereof when she sith her selfe bereft, for very desire of young (whereof this kinde is most desirous) she commeth straight to the Bucke. So; my part, I would rather counseil you to destroy your Rats and Mice with Traps, Banes or Maces: so; besides the gullishnesse and loathsomeesse of the Catte (you know what she layes in the Malt heape) she is most dangerous and pernicious among children, as I my selfe have had good experiance.

Cattes;

Soli Deo honor & gloria.

The end of the third Booke

V

The



The fourth Booke: Entreating of Poultrie, Fowle, Fish, and Bees.

PVLLARIUS. MELLISSEVS.

PVLLA.

So keeping and breading of Cattell, both yieldeth no small commoditie and gaines to the husbandman, so the nourishing and maintenance of Poultrie, Fowles, Bees, and Fish, (if the Countrie be fit) both commonly ariseth to his great advantage, whereby both the revenue is greatly increased, and the table daily with daintie, and no chargeable dishes

furnished. Cages, and houses for Birds, wherein were kept all manner and sorts of Fowle, were first devised by Master Lelius Strabo at Brundisium, from which time it was first put in use, to pen up such creatures, as naturally were accustomed to live at their liberty in the ayre. At which time also began to be brought in strange and outlandish Fowles, the keeping and breeding whereof, yieldeth to the husbandman both pleasure and profit. The chiese place is due to the Cocke and Henne, that are beside to common, as the poorest widdow in the Countrie is able to kepe them. In this Bird there are three points of naturall affection



fection chiefly to be wondered at. The first, the great carefullnesse that they haue during the time of their sitting, whereto soz the desire of hatching their young, they seeme to be careless of either meate or drinke. Secondly, that they beare such love to them, that they sticke not to hazard their owne liues in the defensio[n] of them. And thirdly, that in the stro[n]ge, great colde, or sicknesse, they preserue and nourish them under their winges, not making soz the while any account of their owne selues: and to these I adde a fourth vertue, and that is their valiantnesse, and hardinesse in which they excede all sensible Creatures whatsoeuer, fighting their Battalls so faithfully and truly to the ende, that there is nothing but eminent death (if they be left to their wills) which can separate them *.

And therefore, since these are common soz every man to have, and that they alwayes siede about the house, I thinke it best to begin with them, and to tell you which are best to be liked, which to be brought up, and which to be fatted.

Fiftly, the best to be bought soz broode, are the dunne, the red, the yellow, and the blacke; the white are not to be medled with, because they are commonly tender, and prosper not, neither are they beside fruitfull, and are alwayes the fairest marke in a Hawke, or a Bustards eye. Let therefore your Henne be of a god colour, having a large body, and brest, a great head, with a straight, red, and double combe, white eares and great, her talons even. The best hinde (as Columella saith) are such as haue five clawes, so that they be free from spurres: for such as weare those Cochis weapons are not good soz b[ro]ode, and disdaine the company of the Coche, and lay but seldome, and when they sit, with their untruly spurres they breake their Egges. The little Pullets, or Hennes, though the old age, both soz their unfruitfulness, and other causes disallowe them, yet in many places they prove to be good, and lay many Egges. In England, at this day, they are used as a daintie dish at mens tables.

In the choyse of your Coches, you must provide such as will treate lustily, of colours, as I told you soz the Hennes, and the like number of tallons, and like in many other points, but of stature they must be higher, carrying their heads straight up. Their Combis must be ruddy and high, not hanging, no; falling

The choise
of Hennes
for brood.

The Dun-
hill Hennes.

The choise
of Cockes
of the dunns
hill.

dowme, their eyes blacke and sharpe, their Bills shrot & crooked, their eates great and white, their wattels oygent, having under them as it were, a kinde of grayish beard, the Beake feathers of colours divers, either a pale, golden, or a glistering green, which must hang rulling from his Neck to his shouulders; their breasts must be large, and well brawned, their Wings well feathered and large, their Tailes dubbled and flagging, their cumpes and thighs full of feathers, their legs strong, wel armed with sharpe and deadly Spurres: Their disposition (soz you shall not neede to have them great fighters) would be gentle, quicke, and lively, and specially god wakers, and crowers: soz it is a Wyrd that well appotioneth both the night and the day, & (as Prudensius witnesseth) exhorteth to repentance. Neither must you on the other side, have him a Crabdon, soz he must sometime stand in the defence of his wife, and his childzen, and have stomache to kill or beat away a Snake, or any such hurtfull vermine: but if he be quarrellons, you shal have no rule with him soz fighting and beating his fellowes, not suffering them to treade, though he habe more then his hands full himselfe. This mischiefe you may easily preuent with shackling him with a shoo sole: soz although such lusty fighters are bred up and cherisched for the game, yet are they not to serue the husbandmans turne at home. A Cocke stamed and proportioned after this sort, shall have five or sixe Hennes going with him.

Now for the choise of the Hen, which is as materiall in the Brede as the Cocke, shē ought not to differ much from his excellency, both in valure, vigilancy, l abour soz her selfe, and her Chickins: soz her shape, & biggess are h best, every proportion answering those formerly described; only soz the combe let her have a tuft of feathers like a Crookne: to have many clawes is god, but to want the hinder Claw is no hurt for the safetie of the Egg. An Hen that croweth is neither god Breeder nor Layer, the In perfecion of Breeding and Laitting, the elder Hens are the best, in the perfecion of Laying the yonger Hennes are most able, but soz neither purpose, chuse a fat Henne, soz shē is sloathfull, carelessse and no paines taker*.

M E L L I S S E V S . I pray you let me understand what time of the yere is best for bringing forth of Chickins?

P V L L A R I V S . In some places, specially the hottest Countries,

tries, the Hens beginne to lay in January, in colder Countries, either in February, or at the latter end of January: you must also further their laying by giving them meates for the purpose, as Barley halfe sod, which maketh both the Egges the fayrer, and causeth them to lay the oftner. Some thinke it good to mingle therewith the leaves, or the sedes of Cyclus, which both are thought to be greatly of soare in making them fruitful. If this be not to be had, you may supply the want with Spery, or (as Cardanus saith) with Hempesode, which will cause them to lay all the Winter.

When they lay, you must see that their nests be cleane, & kept full with fresh cleane straw: for otherwise they will be full of fleas, and other vermine, which will not suffer the Hen to bee quiet, whereby the Egges doe not hatch even together, or many times ware addle and rotten. The Eggs that you set under them, must be new lays; howbeit, so they be not above ten dayes olde, it maketh no great matter: if you looke not to them they will straight wayes sit after their first laying, which you must not suffer, for the young Pulletts are better for laying then sitting: the desire of sitting is restrained by thrusting a feather through their nose. The old Hennes must rather be suffered to sit then the younger, because of their experiance. herein must you have a speciall regard to know which be best to sit, for some be better to bring up Chickins then to sit. Others againe, will breake or eate up both their owne Egges, and their fellowes Egges: wherefore you must put aside, andif their Mailes and Willes be sharpe rather imploy them in brooding then in sitting. Democritus telleth, that Chickens may be brought sooth without setting under the Henne, if so be the young of Hennes listed very fine, be put in little bagges, bascked about with soft feathers, upon which the Egges must be laid straight upright with the sharpe end upward: upon these againe must the like quantitie of Hennes young be laid, so that they be of every side closely covered. This done, you must suffer them to lie for the two or thre first dayes, and after, every day turne them, taking good heed, that you knocke them not one against the other in the turning. After twenty dayes, you shall finde the Egges broken: and therefore the twentieth day, plucking away the shels, & ta-

king out the Chickin, you may commit them to the Henne. It is written, that Chickens have bene hatched by the continuall warmth of a womans bosome : beside, it hath bene saene that Egges being laid in an Oven, or a warme place, covered well with straw and chaffe, having a little fire beside, and one to turne them continually, have disclosed and broken at their accustomed time. Aristotle writeth that Egges put in warme vessels, or covered with downe, will hatch of themselves. The number of the Egges that your Henne shall sit upon, some would have to be oddes, and no more, in March nineteen, and no lesse : which number you shall continue all the Summer, till September, or October, after which time it is to no purpose to breed any longer : so the Chickins, by reason of the cold weather, and diseases, never prosper. Yea, some be of opinion, that after the tenth, or twelvth of June, you shall never have faire broode, and that the best season for setting, beginneth at the tenth of March. And herein you must alwayes be sure to have the Hoenen encreasing, from that she be tenne dayes old, till fiftene : so that is the best time to set in. And so must you againe dispose the time, as the hatching may fall out in the encrease of the Hoenen : for the iust time of hatching, there are sundry opinions: Aristotle writeth, that they are hatched in nintene dayes, Varro (for Chickins) one and twentie daies, or twentie dayes: for Peacockes, and Geese, seven and twenty daies, & sometimes more: and Duckes, in the like space to the Hen, specially if they sit night and day, allowing them onely the Morning, and the Evening to feede: which times they must of necessity have.

If so be you will set under your Henne Peacockes Egges with her owne, you must set her upon the Peacockes Egges ten dayes before she have her owne Egges, whereby they shall be hatched all at once, neither must you set above five Peacockes, or Goole Egges under a Henne. If you would have all Cocke Chickins you must choose such Egges as be longest and sharpest, as againe (for Hennes) the roundest, (as both Pliny and Columella write) though Aristotle saeme not of that opinion. To understand which be good Egges, whiche not, you must (as Varro teacheth) put them in water, and such as be naught will

To have
Cocke
Chickins,
or Hennes
Chickins.

will swim aloft, and the god goe straight to the bottome. Others doe hold them up against a Candle, and if they see through them, they judge them light and naught. You must in no wise shake them, or shogge them, least you breake the strings of life, that are but newly begun: it hath beeene seene, that by shaking of the Egges, the Chickins haue beeene hatched lame. We may beside perceiue whether the Egges will prove well or no, if soure daies after the Henne haue sitten, you hold them up in the sun, or other light, and if you see that they be cleare, cast them away, and put other in their places. Against thunder, that many times marreth the Egges, some doe set about them the Leaues, or branches of Bayes, or Bentes, or Crasse, others (againe) the heads of Garlick, and Hailes of yron. In the great heat of the summer, you must now and then spinkle the Egges a little with water, & wet them, least by the extreame heate they ware dry and adle, specially the Eggs of Turkies and Vennes. Whensoeuer you meane to make cleane their nests, you must take up the Egges, and lay them tenderly in some little Basket, and so lay them spedily againe in the cleane nest: neare to the place where the Hen sits, you must set water and meat, that they may the better kepe their nests, and that by their long absence the Egges ware not cold. And although the Henne doth alwayes turne her Egges, yet it behoveth you when she is from the nest, to turne them softly with your hands, that by receiving a like warmth, they may the sooner be readie. And if she have happened to burst any of them with her sãte, you must presently remoue them. At the ninetenth day, you must looke diligently whether the Chickins doe iobbe the shell with their billes, and hearken whether they peape: for many times by reason of the hardnesse of the shell they cannot come forth, and therefore you must helpe them out with your hands, and put them to the Henne, and this you must doe no longer then three daies: for the Egges, that after one and twentie dayes make a noise, haue nothing in them, and therefore you must cast them away, that the Henne lose not her labour. Upon the twentie day, if you stirre the Egges, you shall heare the Chickin; from that time begin the Feathers, the Chickin lying so, as the head resteth upon the right scote, and the right wing lieth up.

Against
burst of
thunder.

on the head, the volke vanishing by little and little. You must not take the Chickins away as they be hatcht, but suffer them to remaine one whole day with the Henne in the Nest without meate or drinke, till such time as they be all hatched. It is wonderfull, & yet the experiance saene, that before they be suffered to eate, they take no harme, though they fall from a great height. The next day, when all the flocke is come forth, Columella would haue you to put them under a Sibe, and to perfume them with the smoke of Penyctiall, or to hang them in a Basket in the smoke, which preserbeth them (as it is thought) from the pippe, which many times destroyeth the poore Chickins: then must you put them into a Cope with the Henne, and feede them at the first with Barley-meale, sodden in water, and sprinckled with a little Wine. Afterwards, when they goe abroad, you must feele eueris one of them whether there remaine any of the meate they received the day before: for if their croppes be not emptie, it betokeneth want of digestion, and therfore you must keape them fasting till all be digested. You must not suffer them to goe farre from the Henne, but to keape them about the Cope, and to feede them till they ware strong with brued Barley, and Barly meale: you must also take god heede, that they be not breathed upon, by either Toad, Snake, or Cuet, for the Ayre of such is so pestilent, as it by & by destroyeth them all: which mischiefe is avoided by burning of Harts haire, Galbanum, or Womans haire, the smoake of all which preventeth this pestilence. You must see beside that they lie warme: for they neither can suffer cold, nor too much heat: the feathers about their tailes must be pulled away, least with the hardning of their dung, the passage be stopped, which if it be, you must open softly with a little quill: you must keape them with the Henne for a moneths space, and after suffer them to goe at liberty. Both the old, and young, are of all other diseases most troubled with the pippe, specially about Baruell time, which is a little white skin, covering the tipps of their tongue, which is to be plucked away with the nailes, and the place to be poudred with Ashes, or Garlik poudred & sprinckled upon it. From this plague you shal preserve them, by feeding them in cleane vessels & giuing them alwaies the purest, & cleannest water, & keeping their houses

Against the
pippe.

uses alwaies cleane, and smoaken, or by smoaking them, as they sit, with the smoake chiefly of Bayes, and Savin. The wiues of the countrie do commonly cure them, by thrusting a feather through their nose, and stirring it every day. If their ^{Sore eyes} eyes be soze, you may heale them with the juice of Purcelane, and Womans milke, annoynting on the outside, or with Cummin, Honey, and Salt Armoniacke.

You shall rid them of Lice, with parched Cummin, & Skaue, ^{Lice.} sacre, a like quantitie of each beaten together, and powred on with Wine: also the water wherein wilde Lupines have bene sodden. If your Herme fall to eating of her Egges, taking ^{Eating Egs.} out the white, you must powre in Plaister, of some liquid thing, that may come to a hardnesse in the shell. To keepe them from ^{Eating Grapes.} eating of Grapes, you shall give them the Berry of wod cal- led the wilde Wine, gathered from the hedge before it be ripe, & sodden with Wheat flower, the edill taste whereof will cause them to loath Grapes. Plinic affirmeth, that if you give them the floweres of the Wine with their meat, they wil not touch h grapes.

There is another disease which these fowle are much subiect unto, which is called the Roupe, and is a filthy Wyre or Impo-^{The Roupe} stimation on the Rump, which in a shourt space will corrupt the whole body: it is to be knowone by an unnaturall ruffling and turning backe of the feathers; and the Cure is to bare the soze and lay it open, then lamente it and take out the Coze, then wash the place with Allome water and salt mingled together.

If your Poultry be bitten or stung with any venomous thing, ^{Biting with vene-} mous things

which you shal easily know by their lowring & sobaine swelling, presently take the leaves of the round Aristolochie, and chopping them and miring them with Bay-butter annoynt the soze there, with and it helpeth:

The Laske or Fluxe in Poultrie is an unnaturall Scoule, ring and aboyding of excrement in more then an ordinary manner, bringing the fowle to that weaknesse that it is not able to subsist; and the Cure is to take Beane-meale and mix-^{The Fluxe.} ing it with Bolearmonie, scald it in milke and so making swall pellets give it the fowle to eat and it will knit them, and dry them, for this disease is gotten onely by eating too much moist meate.

They

Stopping in
the bellie.

They have also another disease whiche is contrary to this, which is called the stopping of the bellie, & dries a fowle so within y they cannot abyde their excrement, which is worse then scowring; the cure is first, to anoynt their vents or tuelle with the oyle of Rose, then give them thre or four pretty square bits of the Helladigne roote cleane wash'd and kept in the siccōpe of Rose and it helpeth.

Crowtrod-
den.

There is a disease amongst Pullen, which is called Crowtrod, which is when a Hen is trodden with a Cartion Crow, Roke or Jackdaw (as it hapneth very oft) & is a disease so pestilent that it is held incurable, & the signes thereof are the Staring up of the Feathers, and a backs turning like those of the Cinnie Hen, beside the hanging downe of her wings and other mortall countenances: the skillfull housewives for this disease take the leaves of round Aristolochē & the leaves of Gentian, and boile them in oyle, and then anoint the Henne all ober therewith, and if in twelue houres you see not amendment, then kill the Henne.

Henne that
Crow.

If your Hen chance to crow, which is an evill and unnatural infirmity in her, you shall forthwith pull her wings, & give her wheate scotched & mixt with the powder of Chanlike, & kepe her as close as is possible from the companie of all other Pulline.

Choys of
Poultrie.

As in all other cattell of the countrey, so in these kindes y best are to be kept, & the woorst either to be sold, or to be killed in the house. And therefore ebery yere about the fall of the leaste, when they cease to b̄ide, you shal lessen their number, & put away the old ones. Such as are above thre yeres, & such as are either unfruitful, or not good bringers up of Chickins, but specially those y eate up either their own Eggs, or their fellowes, or such as after the Cockish manner either crow or tread: to which number you shall also adde, such as were hatched after the tenth of June, which never prove to be sayre: but the Cocke, as long as he is able to tread, you may kepe: for you shall seldom meete with a god Cocke. For fatting, the best are those that have the skins of their necks thicke and fattish. The place where you meane to fat them must be very warme, & of little light, because as both Varro, and our owne experiance sheweth, the light, and their often stirring, kēpeth them from being fat: thus must they be kept for five and twentie dayes, wherein they will be fat.

Fatting of
Poultrie.

Let

Let them be placed in Copes, or Penns made of Lathe or Boards with Trougues for water and meate, and very cleane & neatly kept, and when you put them into the penns, pull away besides their feathers from their heads, their wings, and their tayles, the one for avoyding of Lice, the other for binding their bodies. The meate that you give them, must be Barley meale, which mingled with water, must be made in little pellets, wherewith they will be sat (as some thinke) in fountaine dages: but see that you give it them but moderately at the first, till they well digest it, after give it them in quantitie according as they digest it: and in any wise give them no new, till you perceive, by fielding of their Croppes, that the olde be en-velued. Others doe sprinkle their Peale with Honey soverden in water, putting to thre parts of water, one of Honey, and one of Wine, and wetting herein wheaten bread, they herewithall doe cramme them. Others say, that if you put hereunto a little Milke, they will be wondersfull sat. The Cockrels are gelded (as Aristotle saith) in the hinder part, which when they tread, falleth out: this part, if you burne two or thre times, they will be Capons. And if they be right Capons, their Combs becommeth pale, neither crowning, nor treasuring any more. Our Villaines of the Countrey, cutting them betwixt the legges, take out their stones, and sowing up the wound, anoint it with Butter; which done, they shut them up in a Cope, not suffering them to drinke in a day or two. From the beginning of Haruest, and all Winter long, the offall of the Coone, and the Barnes boore doth feede them suffi- ciently: where they plant Vines, sparing other more costly fodes, they feede them with the kernels of the Grapes: and where there is neither the offall of Coone, nor Grapes, they must be fed with Dates, Sperry, or such like. To cause them to lay in Winter, you must give them (as I told you) Hempe- seede: and as you cram and feede Capons so you may sat, crammie or feede Hens also and in a shoter space, also you may cramme Chickens sooner then either of the both, as thus: First take them alstone as their dammes forsake them or that they be able to defend themselves, and put them into a Pen that is lowe & not too much cloyed with light, then take wheate meale Bar and all to mixing it with new milke, make a stiffe doyle therof, & out of it make

The fourth Booke,

make your Crammes, then steeping them in milke, cramme the Chickens therewith, Morning, Noone, & night; & have great care to make your Crammes very smal for feare of choaking; if with your wheat meale you myre a little fine Datemeale flower, the Crans will be the better, & the Chickens will feede the sooner, howsoeuer in sometyme dayes they will be as fat as they can wallow: there be others that feede them with Toaks that are taken out of strong Ale or Beerre, others feede them with wheat Bran scalded; but then they must have great store thereof in such wise as it may lie continually before them, neither must they want water at any time.

The Capon
to leade
Chickens.

Now whereas before I spake of Capons, their caruynge, use, cramming, & benefit in þ dish, yet here you shal understand that they are excelent for another purpose also, that is to lead, to hede, to gouerne & defend, both Chickens, Ducklings, Turkies, Peahens, Pheasants, Partrige, or indeed any Fowle of their nature, whiche he wil doe (being aplyed thereto) as naturally, as kindly & more sufficently then any Hen whatsoeuer; the greatnessse & largenesse of his body, being much better able to cover them, & his strengthe of greater force to defend them, so that you shal see these Capons leade thirtie, nay fortie of the severall kinds of Fowles formerly spoken of, neither after he hath once taken unto them, dare either Wyke or else Buzzard assault him. Now the way to bring him to this natural affection (before spoken of) you shal take a god Bunch of Arissmatte & crushing it a little, as done as you see the Pullen begin to go to their Roost, take þ Capon & baring his brest, rub it all over with the Arissmatte very hard, þen in the darke put him to Roost & very privately steale & place the chickens under him, whose warmth will take away the smart which þ earthe had raised, insomuch þ presently he will fall in love with them, yet if at any time you finde he beginneth to neglect them, then presently that night rub him againe, & then þene it he will never forsake them; there be some housewives that instead of Arissmatte take Kettels and Kettle him, others take Spearegrasse & rub him with it, others wil neither use Arissmatte Kettles, nor Spearegrasse, but only take a fine yong Wyper and therwith beate & pricke all his brest over, & there is none of these but will effect the worke, only the Arissmatte is the best & safest.

If you would have great Egges, Leoneus teacheth to heate ~~of Egges~~
 into powder Bucke, or Flanders Tile, and mingling it with
 Chesill and Wine, to make it in Dowe, & give it to your Henne,
 The Egges of Pigeons, Cocks, Peacockes, and Turties, be all
 white: the Egges of Water Fowle be greenish, and pale: the
 Cinnie Hennes Egges be like the Pehennes in all things,
 saving that they be speckled as the Turkie Hens. The Phe-
 sants, and the Partricks Egges, are reddish. The Egges of all
 Fowles (as Plinic saith) are of two colours, wherein the Water
 Fowles Egs, having a great deale more yolk then white, &
 that more blacke then others. The Egges of Fishes, are all of
 one colour, having no white in them. The Egges of Birds are
 by reason of their heate, brittle: and Serpents Egges by
 reason of their coldnesse, tough: Fishes, by meanes of their
 moisture, soft in laying, the round part of the Egge commeth
 first out, the shewell being soft, and presently after hard: what
 forme soever they have, the long are most commended, as witnesseth
 the Poet: The Egge in fashion framed long, & of them
 (as I said before) is brought smooth the Cocke Chicken, as of
 the round ones the Henne, though Aristotle be against it. Some
 Hens doe lay very great Egges, and those most times with two
 yolkes, having the shell devide as it were with a circle, which
 both Aristotle wryteth, and our experiance approbesh. Some
 doe lay double, and hatch double: some are so fruitfull, as they
 lay great numbers at once, some every day, some twice a day:
 some are so fruitfull as they kill themselves with laying. In the
 middest of all Egges, there lyeth as it were, a droope of bloud,
 which is supposed to be the heart of the Bird, which is the first
 in all the body framed: the body it self is wrought of the white:
 the sustenance is the yolk: the head, while it is in the shell, is
 bigger then all the body, the eyes shut up more then the head.
 While the Chickin increaseth, the white goeth to the middest,
 and the yolk compasseth round about.

Egges are preserved in Winter, if you keape them in Chaffe, Preserving
of Egges.
 Straine, or Leaves: and in Sommer, if you cover them with
 Branne, or Wheate. Some doe cover them before in fine bea-
 ten salt, for the space of five hours, and after wash them and
 lay them in Chaffe, Straine, or Branne. Others againe cover
 them

The Hen-
house.

them in Beanes, and sonne in Beane flower, & some in heapes of salt: but salt, as it suffeceth not the Egges to corrupt, so it greatly diminiseth the substance of them. Your Hen houses must be made in that part of the house, as lyeth in the winter toward the rising of the Sun, and ioyning as nere as may be to same hill, Ouen, or Chimney, or to the kitchin, so as the smoke may come amongst them: for smoake is very wholsome for this kinde of fowle. And that was (I thinke) the cause that the old people made choyse in their quit-rents of smoke Hennes, as of the best, as it appeareth by old Kentallies. Let the front of your Henne house stand alwayes towards the East, & to that Coast let the doore open. Let the inner courtes be well furnished with Lofts, and Ladders, and small windows opening Eastward, at which your Poultrey may fly out in the morning, and come into the Court at night. Looke that you make them close at night, and let the windows be well letteised for feare of Thernmine. Let your nests and lodgings, both for laying and broodung be ouerly cast: and against every nest and roosting place, place steppes and bordes to come up by, making them as rough as may be, that the Hennes may take god hold when they fly up to them, and not by their ouer-smothenesse, be forced to flutter, and hurt their Egges. It shall not be amisse, if you parter the house both within and without with gos Platiller, wherby neither the wylfull, nor other hurtfull Thernmine may enter in. Wodden floweres are not so fowle to rest upon, which almost all kinde of Birds refuse, because of the hert that they receive by their dung, which if it cleave to their fete, kydeth the Gout. And therfore to comle upon, you must make them Peatches, which Columpella in his booke, shoule be made somesquare: but it is better to have them round, so that they be not too smoothe for them to take hold by. Let the Peatches reach from one side of the wall to the other, so as they stand from the flame a fute in height, and two fote in distance one from the other: and thus haue you the fashion of your Henne house. The Court wherethay goe, must be cleane from dung and durtiness, not having water in it, sowing in one place, and that must be very fayre and cleane: for if it be puddle, or durtie at hundreth (as I say before) the Pippe. To keape their water cleane, you may haue sayd

Catheren

Catchen or stonke Nesseis, & Troughes of ~~wood~~ wood, covered on the toppe, in which there must be severall holes so bigge, as the head of the Fowle may easily enter: for if you shoulde not haue them thus covered, the Poultry would in their drinking defile and pollute it with their dung. Their meate must be giben them betimes in the morning so straying abroad, and a little before night, that they may come the tymelesse to their rest. Those that be in the Coope, must (as Columella saith) be set thrise in the day: the others must be used to an accustomed toyce, that they may come at the calling. The number must be well marked: for they sone deceire their keper. Beside, you must have round about by the walles, good plentious of dust, wherein they may bath and poyne themselves: for as the swyne delighteth to wallow in durt, so doth this kinde to bathe and tumble in the dust.

And thus much touching the Dunghill Coche, Henne, Capon, Chicken and Egges.

I will now procede to a creature, of a much more excellent ^{Of the fighting Cocke} and heroycall nature, and such an one as the Ancients for his height of spirit and greatness of minde, made the onely Companion of the god of Warre, and that is the fighting Cocke, or Cocke for Wattails. And the rather I undertake this labour, because I see the great heightheid wherunto this pastime of creation ascermeth, the many iudicall and most expert handlings which are frequent with all the mysteries hidden in the Arte, and with them I spoyle the infinites that are lovers of the fowle, and woulde take it with greater feruencie, had they any small light or iudition to lead them through the darke pathes and obscurties of the Arte: which since no man of better skill will undertake, I am bound to breake the Ice, & say something of that which those which can say better, will say nothing; and yet I doe not lay downe Rules, but only straine out sturres, and that any time hereafter I haue gone astray in this Arte, I no entouragement to finde out the best way, and to recall misad-
nings.

First to speake something of the nature and dignitie of the ^{Their na-} fighting Cocke, as Ancients, as Plinie, Columella, Varro & others ^{ture and dignitie.} affirme that of all sensible Creatures they are the most beautifull, of the highest spirit, and the most constant and uncontrolable in all

all their actions. For their valour it is so infinite that they end their battailes onely in certaine death, and though the Conquerour sound his own triumph in clapping his wings, & crowing, yet the Conquered even to the last gaspe will shew all the characters of resistance, shewing that howsoeuer his Body may be subiect to Fortune, yet his minde can acknowledge no such deity.

Height of
Spirit.

For their height of spirit they are sayd to be the proudest of all Birds, so their pride abateth at no obiect. The Peacocke pullis downe his Plumes at his blacke ferte, but the Fighting Cocke advanceth his crest and shewes himselfe most glorioius even in the face of the Lyon, insomuch that it is sayd the Lyon trembleth at his presence: they are so great lovers of Glory that they make themselves their owne Idols, and have such a naturall understanding of Glory that they both apprehend and delight in mens praises.

Constancie
in Actions.

For the constancie of their Actions, they are so unalterable in all their Customes, that they seeme to compare with the Sunne and Moone for perseverance. They are said to abide the night (by their Crowing) from thre houres to thre houres, and are such naturall Astronomers, that by one Action or other they discouer the Motions and Influences of the Heavens; They are called the Sentinels of the Night, the breakers of mens sleepes, and by Saint Gregorie himselfe they are called the Messengers of day, the deuiders of houres, and the examiners of the Night.

The Digni-
tie.

Touching the dignitie of this Bird, they were held in such singular Reputation amongst all the Magistrates and Senators in Rome, that they receiveth all their Omens, Augurizmes and prophecies of god or evill fortune, onely from this creature. Nay the Emperours themselves did so farre Idolatrize & ador this Bird, that they would take no Action in hand either of Warre or Civill government, they would neither goe forward to any enterprise, nor recoule from any danger, but onely as the actions of this fowle gave them directions, insomuch that the pore Intrailes of this small thing was helde in Sacrifice of greater balew then the whole Body of the greatest Dre.

The anti-
quie,

Note for the Antiquite of this pastime or recreation (for I can give it no greater epitheton) some would have it as ancient

as the Olimpicke games, and that from the imitation of these Birdes, the Gladiators or Fencers first invented and put in practise the arte of Sworde play; and sure it is not unlikely, for the first two Cockes that ever were bred, would give notice of their nature, so that the sonnes of Noah could not chuse but make use of their enmyt: but leaving Coniectures I finde both by Plinie and others that in the Infancie of the Roman comonwealth, there was yearly held at Pergamus a soleinne triumph or meeting onely to behold Cockefight, which continued so divers dayes, having the reso:nt of all the Nations that dwelled about them, and hence it came to be dispersed farre and neare into other Countries; and so my owne part I doe not finde (in this kingdome of ours) any monument of pleasure whatsoeuer moare auncient then the Cockepit.

Now soz the choyce of the Cocke soz Battell, there are diuers opinions, and great differences in those opinions, soz some onely chuse him by his shape and proportion, coveting neyther Shape, the Gantz nor the Dwarfe, but Alexander size, a meane amongst men, and this is god but not absolute, soz a large Cocke that is couragions and sharpe heeld, will command Conquest, and the dwarfe will shew fine play and give delight to the beholders; Arte and Nature ioyning to descend and suppose weakenesse.

Colours. Others chuse by the colour as Gray, Yellow, Red, Ryed, White, Dunne, &c. As if vertue were in feathers, but this is curiositie, for there are god Cockes of all colours. And as in Roane the best Cockemasters did not aske you of what colour is your Cocke, but of what Country was he bred, whether at Rhodes or at Tenagra, for there was the best breed, or else at Melos or Chalcis, for those were indifferent, and accordingly they gave them estimation, so our best Cockemasters question not so much the plume as the place of Breede, and the true descente and pedigree from a valiant and fortunate Generation.

Others chuse their Cockes onely by their Courage, Anger and impatience, or by their high looks, pride and maestie; but these are all deceyvable, for none is so impatient as the dunghill till he smart, nor treads with moare majesty so long as he walkes not out of his owne knowledge.

The best
Cocke, i.

To make choice then of the best Cockes; above all things be sure that he be truly b̄ed, from a perfect Cocke & a perfect Hen, so; if there be falsehood in eyther, the whole generation will bee cowards, and of the two a fault may better be borne in the Cocke (so he have a good hæle) then in in the Hen: so; other outward Characters there is required in the Cocke a sharpe small Snake head, which art must doe not nature, as shal be taught hereafter; a maestricke pace and countenance, a strong round Body, a full Thigh, a big Legge and large, well bended, sharpe Spurres.

Choynce of
the Henne.

Your Henne must be as perfectly b̄ed as your Cocke; touching her Plume or Colour it shills not, her head would be smal, her eye very chearefull and her Crowne armed with a double Coppell or Crownet; her body would be large, soz so shē will euer her Br̄ode the better, and the feathers on her b̄rest would be long and downie, soz that is most consolet to the Chickens: if she want her hinder clawes she will lesse offend her Egges, if shē be armed with Spurres it shewes courage; if she have no Spurres it is better for her Br̄ode and no impeachment to her valure. Lastly, looke that shē be a painefull layer, a willing sitter; and aboue all things, loving and kinde to her Br̄ode when they are brought forth.

Best times
for breeds.

Touching the best times of Br̄eding these Cocks of kinds or Cocke of the Game, there is amongst Cockmasters great diversity of opinions; some allowing onely from the increase of the Moone in Februario to the increase of the Moone in March; affirming that one March Br̄ode is worth thre of any other Season: and sure I do not much disallow the reason, if the season of the yeare, the place of br̄eding, and all other accomoda-
tions doe concurre and agree with the tendernes of the things Br̄odde; But say other Cockmasters, the p̄evish disability of these is so great, their naturall pronenesse to sodaine sickenesse, their unapt constitution for the receyving of the smalles Colde and many other accydents which happen unto them, as by stormes, and tempests and greate windes, that this season is held somewhat too early, and they rather allow from the increase of the Moone in March, to the increase of the Moone in Apill; But laying the nicer cur-

Curiosities aside, it is found by certaine experiance that you may brede these Birds at any time from March till June, observing (as neare as you can) so to set in the increase of the Spone, that they may be disclosed in the increase of the Hone also.

You shall place the Nest wherein you would have the Of the Nest.
Henne sit, in some warme darke corner neare to which the ayre
of the fier may come, yet in such wise as no other Pulleine
or Fowle whatsoeuer may have recourse thereunto, or that
she may cast her eye upon any thing of her owne kinde; for
these are angry creatures and any thing moves them to dis-
pleasure, and makes them forget their Nests. For the man-
ner of making her Nest, you shall first lay a prett thicke
bed of vxe sande higher on every side than in the midst, then
over it a god thicke layre of course wollelocks or hayre well
wash't and dryed, then aboue it a godthicke Bed of Straws,
padded and soulded close together and made hollow in the
middest, yet so as it may be rather flat then hollow in the bot-
tome here you shall place your Egges close together so as the
Henne may at ease cover them, so to lay moxe is not onely losse,
but also hurtfull unto those shre doth Cover. Number of
Eggs.

must be proportioned according to your store; as if you have
many you may set many, if you have few you must set few, yet
according to the housewives rule you must ever set an odde Egge,
as nine,eleaven,thirtene or fiftene: which howsoever some doe
it after a superstitious manner; yet there is a strong and
necessary rule for the same, for seeing the Egges must
lye round and close together; without this odde Egge
which maketh and filleth up the Center, it is impossi-
ble by an even number to lay them in so god order.

Now there bee some which after the Henne is thus
set, will not trust to her painfulnesse and care in the vien-
ting and disposing of them, but will themselves in the
Hennes absence turne the Egges. But except grosse neglect
bee perceived, this I hould a worke of Supererogation,
and may very well bee spared, for Nature is a Mi-
stresse that will hardly indure controllment, nor did
I ever see an Egge moved that the Henne hath not againe

of her owne accord removed; therefore during the dayes of her sitting which are not above one and twenty, trouble her with nothing, onely see that she be accommodated with all things necessary, as meate, water, sande, dust, fine ashes, small Cravell and the like.

When her time of disclosynge commeth, then you cannot be too carefull nor too curios, because her love to her Egges in generall, may make her neglect her dutie to those which are first disclosed in particular, therfore if you see any such neglect, then take away those which are first disclosed, and having a soft Boxe lyned and covered over with Miniver furre, put them thereinto and set them within the ayre of the fire, and it will preserue them as well and as naturally as if the Henne did her best duty unto them; and thus you may keepe them safe till the Hens haue disclosed all her Egges, and then put them under the Henne againe: now if you haue not Miniver furre, then the next best thing to preserue them in is a Swans skinne, and the worst is wolle, yet when extremity compels you must make use of it. These Chickens must be kept in a close warme boorded roome till they be at least sixe weekes old, and not suffered to goe abroade in the ayre, and during that time you shall serue them well with small Datemeale unbruised, and fine Chilter wheate well bruised; you shall let them have both wafer and new milke, and in the places where their meate and water is, you shall haue small pins made fast in the boards, to which you shall binde prettie big bunches of græne parclly on which they may picke and tyer at their pleasures, and there is nothing that doth more preserue them from the blacke sorneesse to which these creatures are wonderfull incydent, in so much that you shall haue them (to your imagination) pleasant and healthfull and full feeding, in the morning, and before none they will drop downe and die, and nothing to be perceyved more then an extraordinary blackenesse about the head, and therfore I would wish you daily to view them well, and when at any time you finde any alteration or shew of blackenesse then presently to perfume them well with Penitoyall or the stalks of Galliche burnt, so as the smoake may sise all about them, and to let them haue a little more ayre of the fire, for colde

The preser-
vation of
weake
Chickens.

colne and soule fieding onely bledeth this infirmitie.

After they be sixe waches old, you may tyme them alande with the Henne into soone swete Garde, Richard, or some other gral plot, and onely house them at night.

You shall not wayne these Chickens, till you see the Henne begin to neglect them and that they neglect the Henne, which you shall perceve by their stragling from her and by finding Rousles so; themselves without her company.

Presently upon their forsaking the Henne (or before) if you perceive (as necessarily you must) that eyther the Combe or Wattels doe appeare, presently heate an olde knife red hot in the fire, and with that part of the backe thereof which is no broader then the Combe, seare downe the Combe and Wattels and annoynct them with Frankensence & Butter beaten together to agentle halfe: then when the Asket or Scabbe (which was caused by the searing) both arise or fall away, then dry up the soore with a little Potters earth made into powder, and dusted thereon; and this will make them have extraordinary fine small and cleane heads.

At six moneths olde you may send your Cocke-chickens to their severall walkes, as to Lodges in Parkes or Warrens, to graunge-houses or houses remote from neighbours, to baynes or Shepe-coates where Shepe are usually spilken, to Spilles or other places which are remote and seke from the annoyntis of other Cockes or the rest of evill vermine, especially (as neare as you can) let their walkes be free from stinking muddy ditches, hinks and common helvers, for nothing is more unwholesome.

In ancient times they would allow a Cocke but thre Hennes at the most, but we finde by experiance that sixe are no more but a competent number.

A Cocke would not be put to Battell, nor held from Battell by the number of yeares or dayes of his age, but by the stateliness of his strength, length and compleat perfection of his weapons: & although our forefathers would allow none for fight under two yeares old, yet we see now in these dayes that some Cockes will be fully armed shewe all the perfections of nature much sooner, & will fight out their battell with greater spirit & more danger then those

Dubbing of
Chickens.

which are longer: vix they come to the triall of their vertue, therefore let it be your rule that as soon as you see your Cocke sufficiently armed, and that there is no further hope of better weapons, then boldly to turne him into the list to try his fortune.

Of the
Cocks
perch.

There hath bene great disputation among our Cock masters Concerning the Cocke perch whereon he is to sit, some affirming that it availeth much to the bettering of the Cocke, & I am of the same opinion; yet altogether without the list of curiositie, only I would have you obserue that the perch whereon your Cocke sitteth when he is in his walke among his Hens, would be of a round thickenesse, as three inches, or thre inches and halfe in compasse, which is convenient both for him and his Hens; and the length would be such that it might receive him & his Henne to sit about: But so; his perch in his private Penne (when he is in seide for a Battail) that would be foure inches and a halfe or neare fives inches in compasse, in length betwixt seaden and eight inches, and in height ten; & it would be so made that it might be moved from corner to corner in the Pen, according as you finde the cocke best affected, and Penne placed:

Preparing
of Cocks
for the Batt
aille.

Now after your Cocke is thus bed and brought up: If you intend to have him prepared for battell (which is a recreacion which continueth all the fall, winter and the spring) you may at your best convenient leasure take up your Cocke or Cockes so many as you intend for the spatz, and put them into severall pens, and though a penmeth fire, seaden or eight weekes, be a time sufficient for the preparing of any Cocke; yet if he be in true and god kepe, the longer he is set the better is his performance: as long as you have brought him to his penne you shall see that or four dayes or a week, if you please, sete the Cocke both Morning, Noone, and Evening, (for these only are your feeding times and no other) with any course Wheate Bread (and the courser the better, so it be not mixt with any other graine) so; it is strong and cleneth. Then when you finde (as his exure will shew unto you, which will be changed both Colour and substance,) that all the fatte gone which he got all his walke, is thoroughly scoured out of his body, then shall then to prouoce him the better strengthe and breath

Bread, take him: and another Cocke (which you doe not extreme and that is not fully his match) and putting Hottes on their halles, which are armours or defences to kepe their Spurres from wounding them, and are made sometimes of Leather and Hammell, or other strong stoffe and Wunsholl; yet the best of all other are those which are made of belue & pure, fine Cotten wolle; and with these Hottes let them fight, Spurre and cuffe one another a godly prattie space till they beginne to groan wearie and fall to taching; then part them and taking the Cocke (which is in byt) into your armes, give him a couple of bigge Knolls o'lumps like to Capons-Creams, of Mele, graine Sene, Butter and Sugar-candie beaten together in a morter to a past, and then presently put him into a close Basket, with straine both above and underneath him, and so let him simeone and sweat till the evening; so as the Sparring and exercise breatheth and melteth the Creasse, so this scowring avaides it from the Bodie, and keepeth the Cocke strong and healthfull.

The belt
Scowring.

At evening when you feed your other Cocks, take those which you sparr'd in the morning out of their stoves, & having shewed their heads over with a fine soft sarcenet rag moistned with the oyle of bitter almons, put them againe into their pens, then having cut them a sufficient quantitie of the still course Bread, take their Bread troughes and put into the bottome of them a little fine chalke beaten to pouder, and above it the Bread and so let them liue at pleasure; others use to put with their Bread the new wine wine of a Boy, and it is good, but the chalke is a great deale the better.

Having thus fed and exercized your Cocke for a while, you shall afterward during all the whole time of your feeding, let him eat nothing but the finest and manchet that you can buy, and cutting away all the crust both above and below, and as at this time, so at all times else inhabitation, be sure that your Cocke want not water, and let it be out of the clearest fountaine you can finde, for nothing is so unwholesome as corrupt and impient water; If in a great quantity of water you dissolve a little of the bell Juice of Licorice and so give it your Cocke, it is a great preseruer and fortifier of the wine, also to set betweene their Troughes little banchells of herbe or grass;

The fourth Booke,

Inwhereon they may pecke at pleasure, it will kepe them from
Poxes, Catarrhes and Rheumes.

There be some that make speciall Coche bread in the man-
ner of flat Cakes, of Metherflower, Datemeale flower, old Ale,
whites of Egges and butter; but neither this nor any other
Bread whatsoeuer is better then the pure old right Panchet.

Will a fortnight before your battell, you shall obserue your
Sparring dayes twice a weeke, or other, straunging and fiddling
as was before shewed; but when the time draweth so neare
you shall no more sparcle him, but onely chase and course him
up and downe in some greene and even field by shewing him a
Coche, and then running away from him, then shewing him
againe and running away againe, and soe and then sursting
him to haue a blowe or twoe at him: thus you shall kepe your
Coche in breath and nimblenesse, and neither make him sick
or sore; but this you shal not doe above twice in the weeke at most.
When you haue thus got your Cocke strength by fiddling, & wunde
by exercise, your next care must be the matching of him, so to
give to his enemy advantage, you give fro him halfe his courage.

Advantages consist in length and strength, that is, in Galle,
nelle and Thickenesse: if his adversarie be too high for him,
then shall he reach his head: if he be too strong for him, how
shall he bear his blowes: therefore in either of these give
ones. The first of these you may judge by your eye, the other by
the grippe of your hand, but if you be doubtfull or unskillfull in
either, then rely upon the judgement of those which are both
faithfull and Skilfull.

Of the Battell. When your Coche is equally matched, it is then your part to
give him all the naturall lawfull advantages, which may a-
vail for his conquest, as first to disbutpen him of all things su-
perfluous, as extravagant feathers about his head, the long fea-
thers of his Spane, & vair from the head to the shouolders; & this
must be done as cleare to the nochtun as may be, for the least feather
his enemy can catch hold on, is a lance by whiche he will rise to
defend him; also the small feathers about his rumpe & others of
like nature. As thus he takes away things superfluous, so you
must note to those which haue any thing wanting, as if his
Neckes be rough, you must smooth it but not weaken it; if his
Spurres

Of march-
ing.

Of advan-
tage.

Of the Bat-
tell.

Spurres be blunt and the ben, you must sharpen them & make them so peicing that on the smalllest entrance they may run up to the very beane of the leg; for his wings you must make thy like the wings of a Dragon, every feather like a poynt, Rabbing and wounding wheresover they touch: this done rub his head over with your drie Spittell & so leave him to fortune.

Now because these battayles are euer for the most part mortal and end in death, I will give you those cures which many times may prevent death, and at all times give helpe for those wounds which are curable.

And first I will begin with the eye, because it is euer in the greatest danger & the ostest blemished therefore The cure of Wounds.

when your coche hath receaved any such blemish, first with your mouth sucke away the blood and liche the Eye cleane that you may see the woorke of the wound, then take two spawefull of foyre shillings Beere that is ould and cleare, and halfe so much lise Honey, and having mixt them well together, warme it on the fire, and therewith wash the Cochs eye twice or thrice a day till it be whole.

If your Cocke (as it is a common mischance) happen to beame Of Veining himselfe, and so by the flur of blood faint and so lose the Battell, presently take him up, and habing bound out the beane wrap a littell hard waxe therpon & it is a present cure, but drop not on the way burning hot, but onely so moltes that it may stick & no more.

For any wound whatsoeuer in generall whiche a Coche shall receive either in Battaille or otherwise, first sucke out the blood Wounds in generall. well, then squirent into the hole warme white wine; after drye the wound and stop up the hollownesse with Frankensence and Swets Butter beaten together to a very gentle Masse, as was before shewed unto you.

Coches after Battayle are wonderfullly subject to Impollu- Of Impo-
mations, partly by the depe hollownesse of the wounds they re-
ceive, partly by the smallnesse of the oxifice made by the spur, skumations.
which loseth before the bottome be scowled, and partly by the overhastinesse of their keepers which will not take leasure in their cures: Now to know these hard impollu-
mations (for Coches have not any that are soft) when you looke and search
the Coche, if you finde about his head or other parts any
knobbes or harde swellings which are of a cloudey rednesse
with

With a little blacke specke as bigge as a pinnes head; presently with a shurge poynknife open it and thrust out the chere which will be thicke and white, then sucke it to leave no corruption behinde, and thelly fill up the hole with the former salbe of Franchifence; and so turne him abroad.

Many other casualties may happen to fighting Cockes, but these cures will set all safte.

I will now speake of Geese, and Ducks which are of the number of those that are called Amphibis, because they liue as well upon the land, as the water. And because the keping of Geese requires no great labour, it is a thing not unusefull for the Husbandman, for that (if he have place commounions for it) it is done without any charges, and yieldeth good advantage both with their hauoe and feathers.

Moreover, they are a very good dish for the Table: yea, being more watchfull then the Dogges, they give warning when you drepe. And therefore they were with the Romanes had in great honour, because they with their goggling bewrayed the enemy, that otherwise in the night time had taken the Tonne. Plinic wryteth of a Goose that would never be from the philosopher

The choyce Lacydes. Your choyce must be of those that be of the fattest kind: Vairo liketh best the white ones, which colour was most esteemed in the olde tyme, as apperteineth by the presernts that were given: the same Vairo accounteth the gray for a wilde kind. They are kept in Marches, Fennes, Lakes, and sownd Commons: so to Come ground, Medowes, and Pastures, it is a very hurtfull fowle: he bitoth what neuer young sayling the way reach, and what he once hath bitten, will neuer lightly p:oper againe: besides, he trencheth the ground whiche is unprofitable, or rather most hurtfull dunging: wherefore (as I said) it is best to keape them in Fennes, Lakes and Marches. If you haue stoe of such ground, you shall doe well to keape them: so you cannot well keape them without god stoe of water and pasture. When you make choyce of your Camber, let him (as neare as you can) be knabish & unhappy: so they will best defend their Goslings: and so his colour white or gray are the best, pride are but indiffe- Their meat & blache are naught". The Geese delighteth in such meat as is naturally moist and cold, & shunmeth naturally such things

as are hysfull for her, as the lease of the May, and (as Alianus witnesseth) the Cleander: the best & mettest time for them to hymay in, is from the Kalenda of March, to the tenth of June. They tread most commonly in the water, while they swim in the Rivers, or fish-ponds. Columella would have you keepe soe every Gander, thre^e Geese, thinking by reason of their unwealinesse, this number to suffice: within your Court, you must make them soe; their better safety, seuerall, and secret pennes, in sundry parts thereof, where they may sit and bide. Some would haue the Geese come stamed in such order, as every Goose may haue a place to haue selfe: which, if any man thinke to troublesome, he may make one sufficient wide roome to sette the all. The places where they shall lay, must be bytie, and well strewn with straw, or such soft matter, and well defended from Wermine. The Goose must not be suffered to lay out of her nest, but when you shall perceiue they lacke it, you must grope them, and if they be with Egge, which you shall easily siele, then shut them up in their nests, which you shall not neare to doe above once, or twise: soe where she hath once layd, she will alwaies of herselfe lacke to be. They will lay (as some hold opinion) thrise in the yere, if they be not suffered to sit. The Egges of Geese, and Swannes, were used (as Alianus witnesseth) as a most daintie dish at Banquets, among the Kings and Princes of the Indies. Aristotle affirmeth, that the Goose alwaies useth to sit, and never the Gander, contrary to the order of many other fowles, continuing alwaies till she haue hatched. After the last laying, you shall suffer them to sit, and marke every ones Egges with a severall marke, that they may be set under their owne Goose, for it is thought they will never hatch a strangers Egges, without she haue her owne under her. Of Goose Egges, as of Pevenues Egges, you shall (as I said before) never set under a Henne above five, nor under thre: but under the Goose you shall set at the least seven, and at the most fifteene. You must keepe to lay under your Egges, the rates of Hettiers, which they say per serveth them against the stinging of Hettiers, which otherwise many times killeth the Gosling, if they sting them. The Egges will not be hatched if the weather be cold, before the thirtieth day, if it be warme, in lester time: howbeit for the first part.

Their breed
ing time.

The fourth Booke,

part, the Gosling is hatched the thirtieth day after the sittynge, somme daies are to set by their Nells Barley steeped in water, or Spault, whereby the Gose shall not be forced to be any whyle absent from her Egges. When your Goslings are come forth, you shall for the first ten daies feede them with the Gose in the Nest. Afterwards, when the weather is faire, you may suffer them to goe abroad, taking good heede that they be not stunged with nettles, nor that you let them goe an hungred into the pastures: but to give them after they goe abroad the leaves of Endive, or Lettuce chopt, to allwage their hunger: so if you put them an hungred into the field, they straine & breake their owne necks, with pulling at the tough and stubborn wieds, by reason of the sudden slatting bache againe of the wiede. The Goslings of divers bodes must not goe together, nor be shut up together, for hurting one another. When they be sonce moneths old, or somewhat before, is best time so satting them: the younge & are soncest, and easeliest fatted. If you give them ground malt and wheate bannye, you neede give them nothing else, so you let them have drinke enough, and keepe them from going abroad. The Crakes did use to put to two parts of ground Spault, sonce parts of Banne, tempyng it with water, letting them drinke thrise a day, and at midnight. Yet this manner of satting is better for the young Gose which we call the Greene Gose, then for the elder sort of Gose which we kill at Michaelmas and Christmas. The greene Gosse may be put to side at a moneth old, & will be thorold fatt in an other moneth especially if you fadde them thrice a day with boylid Dates, and give them god stoe thereto, and instead of water give them milke or at least milke & water mixt together. Now for the satting of the elder Gose, when the stubble fields are spent, you shall Capthem up in close darke pens, & feede them morning monre, and night with god stoe of sweete dry Dates and ground Wheates, or else with Malte malte and scalped bannye, & for their drinke let them haue water made white with Barley meale, and thereof let them haue god stoe; and thus doing you may haue a Gose sufficienly fatted in one and twenty daies. If you would haue their Liveres soft and tender, you shall minche dry Pigges, well beaten with beetar, and making

making pellets thereof, cram them with it for the space of seuentene or twenty dayes. The Jewes at this day, being the skillfullest fadours that be, doe use a strange order in the fatting of them, wrapping the Goose in a Linnen Apron, they hang her up in a darke place, stopping her eares with Deason, or some other thing, that by neither hearing, nor seeing of any thing, shal be not soyled to struggle, nor cry: after they give her pellets of ground Malt, or Barley steeped in water, thrise a day, setting by them water and gravell, by which manner of fadung they make them so fatte, as the Liver many times commeth to be five pound in weight. Whilst I was at the Councell of Wormes, there was a Liver of a Goose brought me by a Jeiv, that weighed fourre pound. Plinie is also a witnesse of the greatness of the Liver of fat Geese, affirming, that they will grow after they be out of the bodies, being spinkled with milke. The common order of fatting with our Countrey people, is to shut them up in a darke, and a narrow place, and to set before them Barley, or Beech wheate, giving them water, with a littel sand, or gravell in their Troughe: and with this order they have them fat in souretene dayes. After harvest, they will be fat with the Grotten, or Stubble. Now touching the profit of their feathers, which are of great use both for the Scribenars, the Fletcher and many other purposes; howsoever the Auncients perswade you to pull, clip, or cut them twice a yeare, yet let me advise you to the contrary, both because the seasons of the yeare (which are Apill and October) aunswere not the worke, as also because you disable the flight of the Goose and make her subiect to all her soes, as the Fore, and other vermine; and besides by uncloathing her in the winter strike the colde into her body which kils her sodainely, therefore to prevent these mischeives, stay till the moultynge time, when nature doth that kindly which you would doe unkindly, or till her death when shal yelds you the Tribune of all shal hath, and then you may take her feathers and use them at your pleasure.

Now for the diseases whiche are incident to these foulis, they are few, and indeede but one of any moment, and that is the Gargill, which is a very contagious and mortall disease, stop-

ping the head in such a sort that in a moment they fall doloure dead. The cure is to take thre or fourte cloves of Garlick and bruising them in a Morter mire them with the fine searst powder of Clicampane and sweet Butter, and so make them into pretty big long roules like Cranes, and so give them to the Goose in the morning fasting, and then shut her up into a close Pen for two houres after; and this is enough for a Goose*.

Duckles,

Ducks and Teales are to be ordered in like manner almost as the Goose, saving that they delight more in waters and Marishes: and therefore you must soke some Waters, Lakes, or Poles, for them, whereunto they may easilly goe and swimme, and dive at their pleasure. Columella would have a Court for the nonce for them, where no Cattell use, and neare to the house, round about the which you shall build for them little handsome Romes, thre fote square, with pretty dvores to every one of them: which when they braede, you shall keepe shut. Hard by, you must have eyther some Pond, or River, wherein (as I said) they may swimme: for without the helpe of the water they can as evill live, as without the land. It is good also to have neare unto them, some god pasture, or Meadow, or to set about the Ponds or Rivers, such Herbs as they best like; as Claver, Fenegrieke, Endive, Lettuce, and such other as they most delight in, and wherewith their young doe well fede: beside, you must give them Dates, Barley, and other Corne in water. There is nothing that they more love then Acoynes, nor that better fatteneth them. They delight wonderfully to be amongst Rades and Hedges, wherein they may lye safe from rabenous birds, but so, as there grow no great stalked wades, that may hinder their swimming: for they delight greatly to play themselves in the water, and to striue who can swimme fakkest, when the weather is saite and warme: for as they love such places where they may best prey upon the creatures of the water, so are they much offended if they be restrayned of their liberty in swimming. In Winter, when the water is frozen, you must ply them sometimes with meate. They delight to make their Nests in some secret Covert, but therein you must prevent them, and make their Nests in their owne lodging, or abroad, well covered and closed

closed with ~~W~~ædes: to which nest you must have some little sluce, or gutter, by which you may every day poure in water and meate. Their foode must be (as I said) Dates, Barley, Pease, Panicle, Millet, and Soperie, if you have any froze. They lay great stoe of Egges, wherewith, as with Goose Egges, you may well feede your familie. The Egges of Ducks and Geese, are kept in like sort as I told you of Hennes Egges: and beside, in ~~W~~anne, ~~W~~heate, or Ashes. They bræde in the same season that Geese, and other Fowles doe; about Hatch and Aprill. And thereforesoe where you keape them, you must strewe stickes and straws soz them to make their nests withall. Their Egges must be suffered to be hatched by themselves, or else remoued and set under some Henne: for the Ducklings that the Hennes hatcheth, are thought to be gentler and tamer. You must take god herbe, that the Egges which they lay, be not eaten and spoyled by Crows and Pyes, while the Damme is sækking abroad soz meate. If so be you have Rivers and Lakes soz the purpose, it is best to let the Dammes bring them up: soz when they be hatched, they will liue very well upon the water with their Dammes, without any charge at all: onely take god herbe, that they be deafeaded from Buzzards, Kites, Crows, and other like ~~W~~ermine: but so gen use them, as they will every night come home to the house: soz it is not god to let them be abroad in the night, for danger of los-
ing them, and making them wilde. Yet it hath bene scene, that such as have hatched abroad, have afterwards come home, and brought with them a great number at their tailes. When I was Ambassadour in England, it was told me by men of god credite, that there was in Scotland neare to the ~~W~~ea cer-
taine trees, that yearly brought forth a fruit, that falling into the ~~W~~ea, became a kinde of wilde Ducks, or rather Barnacles, whiche though it seemed strange to me, yet found I Aristotle a witnessse of the like, who writheth, that the River Hypans in Scyria, bringeth forth trees, whose leaves being somewhat larger then Maple leaves, thereof commeth a kind of soure fer-
ted Birdes.

Now as these tame Ducks, if you will preserue wilde Ducks, ^{The Wilde-}
whiche are much ^þ wholsomer food & of greater estimation with ^{Ducks.}

all

all Noblemen and Gentlemen, which are Faulconers as well for the readinesse and spedinesse of their spoyle, as also for the making of their young Hawkes (being ready Craynes) ever at hand upon any occasion; you shall then wall in some handsome pond, moate or paece of river, and leaving the top open, cover it with a stronge Net, and plant about the Bankes great tufts of Driers, Rades and Bulrushes; then cut prettie intricate shives and holes in the Bankes where the fowle may hide themselves at their pleasures, for that onely will make them feare and forget their Imprisonment: besides they are excellent for their breeding, for the Wilde ducke when she layeth will steale from the Drake and conceale her Nest; when she hath hatched she is most carefull and tender over her Brode, and requireth no assistance but her meate, which she must have duly, have fresh, and at least twice or thriee a day; and their meate would be the hinder ends of Barley or Wheat, scalded Bran, Fitches, Dates, Sheggs and such like. The house henne will sit and hatch the wilde Ducks Egges, and the meate is esteemed the better, but the Ducklings are in greater danger of the kite when they goe into the water, because the Henne cannot defend them. There is a breede of Wilde Duckes in the Low-countries which are called Toy-duckes, and are knowne by the greatness and flatnesse of their Bills, these after you have acquainted and wonted to any place, and that they have once breed, you may let them goe abroad at their pleasure, for there is nothing but death can keepe them from their owne home; and it is certaine that what Ducks soever they come in company withall, they are such inticers that they will bring them home with them be the numbers never so great, whence it comes that there is now in England great store of them, yet their first beginning was from the Heather-lands. These Ducks are kept with a quarter of the charge that other Wilde Duckes are, because they have liberty to goe abroad and shifte for themselves. And in this manner as you keepe these Wilde Duckes you may keepe any other wilde fowle of their kinde, as Tayles, Plovers, Widgeons, Shel-Drakes, and the like*.

The Coyz
ducke.

Peacockes.

But now to Peacockes, whi ch Birds, being more for pleasure than

than profit, are mæter to be kept of Noble-men than of poure husbands of the Countrey, though Varro inviteth, what M. Ausidius Lurco, who first began the satting of this fowl *, made yere of his Peacocks sōure hundred pound, whose example numbers following, the price of Peacocks grew to be great, so much, as their Egges were sold for halfe a crowne a piece, the Peacocks themselves, at sōure Nobles a piece.

The flesh is neither god, delicate nor lesome, but vñely a dish for state and shew, being such if it be rosted never so dry, yet in sōure and twentie hōwers it will gine againe, and be as taw as almost at the first roasting, no other reason being to be given therfore but the unwholesomnesse of their feeding, being a bird that delighth to eate newtes, Toades, Frogs, Adders & Snakes, whence it comes that he is called the messenger of the husbandmans yars and moze then his beautie to looke upon, & the ornament of his feathers for sundry purposes, I hardly kno'v any other vertue in him *. Hortensius they say, was the first that ever killed Peacocke for the Table in Rome, as a new dish at the Priests feast. To this bird, is ascribed both understanding, and glōzy: for being praised, he sets up straight his taile, and (as Plinic eloquently describes it) chiesely against the hemme, whereby the beantie may more be seene. His taile falling every þare with the fall of the lease, he mounteth and crepeth in corners till his tayle be sprong againe. They goe abroad as Hennes and Chickins doe without a keeper, and get their owne livings, they be best kept in little Islands: for they s̄lie neither hie, nor farre off. Some thinke it to be a spitefull and envious Bird, as the Goose to be shamefull, and that he devoureth his owne dung, becasuse he would haue no man receive benefit by him. He liveth (as Aristotle saith) five and twentie yéeres: he byedeth at thre yéeres olde, the Cocke having his feathers divers coloured: he hatcheth in thirtie dayes, as the Goose doth, and layeth thre times in a yéere. If the Egges be taken away, and set under a Henne, you must looke that those that you set under a Henne, be new laid, and that the Henne from the first of the Moone, be set upon nine Egges, five of the Peacocks, and sōure of her owne. The tenth day after she hath sit, take away the Hennes Egges, and put under

The fourth Booke,

the like number of stch Hennes Egges. They must be turned, and therfore marked upon one side. And so that you choose the greatest Henne, for if the Henne be little, you must take the lesser number of Egges, as thre Peahens Egges, and sixt Hen Egges. When they be hatched, you must as you doe with the Henne, let them alone the first day: afterwards bring them out, and put them with the damme into a Pen, and feede them at the first with Barley flowre, sprinkled with water, or pappe made of any other Corne, and cooled. A few dayes after, give them beside this, chopped Lekes, and Cruds, or fresh Cheeze, the Wher well w:ung out: so Wher is thought to be very hurtfull so the Chickins. After they be a moneth old, you may let them goe in the field, and follow the Henne, tyng the Hen with a long line, that she goe not too farre abroad but that the Chickin may come home in time. After the sixt moneth, you may give them Barley, and B:rad: and after the seauenth moneth, you may put them to coul in the house with the other, not suffering them to sit upon the ground, but upon Peaches for taking of cold. And although when they ware great, they chiesely delight to sit upon the topes of houses, and be as the Goose is, which are the best watchmen, and also the best warning gibets in the night time: yet is it best for you to use them to sit upon Peaches in houses made purposely for them. Columella thinkes it not god to suffer sundry Hennes with their Chickins to feede together, because the Henne after she hath a bigger then her owne, maketh the leste account of her owne Chickins, and many times by that occasion forsaketh them. The Cocke, by the great lust that he hath to tread, breakes a sunder the Eggs that be under the Hen, and therfore it is best to have the Hens to sit as secretly as may be: they also use to beat and chase their owne Chickins, till they set them crested upon the head, taking them till then, to be none of their owne. One Cocke sufficeth for five Hennes, who by too oft treading, doth many times cause that the Egges never come to god. In warme countries they begin to tread in February, when setting up his taile round about him, taking himselfe for no small person, he beginneth to wone, & therfore at this time both the Cocks and the Hen are

are to be cherished with meates for the purpose to increase their lust, as Beanes tolled a little by the fire, and given them warme every five dayes in the morning. The quarrelous and troublesome Cockes, must be seuered from their fellowes, soz hurting the weaker, and keeping others from treading. The Hennes must be kept so, as they may lay only in their houses, and every day groped for her Egges, and hardly looked to, with soft straw laid under their Peaches: for many times they lay as they sitt upon the Peach. The diseases of this Diseases. Fowle, and the remedies, are almost one with the diseases of the house-Cocke and the Henne spoken of before, that is, the Pippe, and ill digestion. Their greatest danger is lohen their Coames come first out, soz then are they pained, as children are in brading of teeth.

The Ginnie Cocke or Turkie Cocke, though it be a stranger in other Countries, yet is very well knowne in England.

Some have supposed them to be a kinde of the Birds, cal-
led in old time Meleagridres, because of their blewish Coames: but these kindes haue no Coames, but onely wattles. Others againe reckon them for a kinde of Peacockes, because that they doe in treading time after the same sort, spread and set up their tailes, bragging and vanting themselues: howbeit they neither resemble these in all points. But because this kinde of Fowle, both for their rauenesse, and also the greatnessse of their bodie, is at this day kept in great flockes, it shall not be much amisse to speake of them: soz in daintinessse and godnesse of meate, the Hennes may compare with any Fowle, and the Cocke farre excell them. The colour of their feathers, is for the most part white, blacke, or pied white and blacke, some blew and blacke. Their fette are like unto the Peacockes, their taile short, but spreading, and borne up after the Peacockes guise, specially when they tread. The heads & the neckes of them, are naked without feathers, covered with a wrinkled skin, in manner of a Cowle, or a Hoode, which hanging over their billes, they walke up, or let fall at thir pleasures. The Cocke hath the greater wattles under his chin, and on his brest a tuft of haire. The colour of that wrinkled skinne about his head (which hangeth over his bill, and about

Turkie
Cockes.

his necke, all swelling as it were with little blashers) he
 hangeth from time to time like the Camazion, to all colours of
 the Rainebow, sometimes white, sometimes red, sometimes
 blw, sometimes yelloww, which colours ever alstirring, the Bird
 appeareth as it were a miracle of Nature. The dieting and
 keeping of them, is in all things contrary to the Peacocke, de-
 lighting in nothing that is not swete, cleanlie and wholesome,
 as the best Co:ne and pulse, young springing up grasse, wormes,
 young knails and such like : the stubble fields will sat them
 as it doth the Gose, and if they may have libertie and a large
 walke, they will shift for themselves without care-taking, only þ
 Bird is a tender Birde * & cannot away with cold and wet. It
 is a Bird wonderfully given to hysing, every Cocke must as
 the Peacocke, have four or five Hennes with him : they are
 mox sooward in hysing then the Peacocke, beginning either
 the first yere, or at the farrthest at two yeres old: they begin to lay
 in March, or sooner. In hot Countries they lay great numbers
 of Eggs, if they be continually taken from them, and set under
 Hennes; and if so be ye you take them not away, they begin to sit
 at the first : so they be of all others most given to sitting, and so
 much, that if you take away all their Egges, they will sit upon a
 stone, or many times the bare Nest. You must therefore re-
 straine them of this desire, either thrusting a feather through
 their nose (as I told you before) or by wetting their bellies with
 cold water. You must set under their Egges as (I taught you
 before) in the Peacocke: for they habe both one time of hatching.
 The keeper must marke the one side of the Egges, and al-
 waies turne them, sprinkling them now and then gently with
 faire water, and take heed the Cocke come not at them, for
 he will breake them as well as the Peacocke: for the Cocke
 of this kinde, is a strokard and mischievous Bird. The
 Chickins being hatched under a Henne, or under the owne
 Damme, may be kept with either, and will prosper exceeding
 well, onely you must kepe them in some walled or paled greene
 Court, Orchard or Garden, for they are great strayers and
 very muche subject to be lost, and the Dam too careless, that if
 she habe one to follow her shal neglecteth all the rest. The best
 food to nourish them withall is rawe Cudz cleane prest,

to graine cheese cut in small bits, let their drinke be new Milke in one Crough, and Milke and water in another mixed; you must sade them many times in the day, and distribute the food with your owne hands, soing every one have their due, for the Turkie hemme will not like the houshenne, call and clocke her Chickins together to sade them; after they are come to strength and maturity, you may then inlarge their walke*: for they will eat any thing, & delight in Gresse, Wardes, Gavel, & Hand. And because they cannot away with cold, nor wet, you must keape them in Winter, in the warmest & drieſt places you have. Th: Peaches whereon they use to ſit, muſt not be high, but an eight or ten foot from the ground, neither be they able to ſit any great height, and therefore muſt be holpen with Lathets, or ſteppes. The greatest diſease that they are ſubject unto, is the Pippe, and the Squecke, which muſt be holpen in like ſort as the Hennes, and the Egges kept after the ſame manner. In ſome places they use to make Capons of them when they be young, which are ſerved as a daintie diſh to the Table.

Now for the generall ſeeding and ſatting of the elder Turkies, especially againſt Christmas, you ſhall firſt give them all the helpe that the ſtubble field can yelde, or the Barne dizes; then finding them well ſtricken in flesh, house them, and for the firſt foorthnight ſade them with Raw malte or ſoddene Dates and after Cramme them with Barley meale, and milke made into paſt as you cramme Capons, and it is incrediblē to what fatneſſe they will come. And this I thinkne ſufficient for the Turkie, I will ſpeakē of the Pigeon which*: whosoeuer hee bee, that giues himſelfe to the trade of Husbandrie, it behoveth him ſpecially to have a care for breeding of Pigeons, as well for the the great commodities they yeld to the ditchin, as for the profit and yerely reuenew that they yeld (if there be god ſize of Corne fields) in the Market. Varro witteth, that in his time a payze of Pigeons were ſold for 1000. H. S. And that Lucius Axius, a Knight of Rome, before the ciuill warres betwixt Caesar and Pompey, ſold his Pigeons at terme pound the payze: ſo much was that time given to wantonnesſe,

Pigeons.

wantoriness, and gluttony; yea, at this day in our time, hath bin
lirene given for a payre of Pigeons tennie pound Flemish. And
therefore the Dovehouses are commonly built with great cost,
and beautie, in the topes of turrets and houses, from whence
by narrow grated windowes they lie abroad to their sadding.
Pigeons (if the country be so to them) are fed and maintained
with little cost, feeding themselves all the yere long with such
meate as they finde abroad, except at such time as the ground
is coveted with snow, when as you must of necessite help them
with a little meat. There is two sorts of them, one wide kind,
that is brought up in Dove-houses, and of colour, either blawissh
white, speckled, or dunme: howbeit, the white is not good to
be kept, because they be soonest destroyed with vermine. In
Italy there are of this sort, as bigge againe as ours, and are
now common in Flaunders. Another sort is more familiar and
tame, and some thing more large of body, with rough flets, and
commonly of colour white, sometime speckled and yellowissh:
this kinde is commonly kept in Cities and Townes, where
the others cannot be kept, and is fed with meate at home, and
because they are ever in danger of vermine, and ravening birds,
they are still kept within dores, and alwayes fed at home. This
kinde the common people call tame Pigeons, or moneth
Pigeons, because they bræde every moneth. Both these
sorts are wonderous fruitfull, bræding commonly eight times
a yere (if the kinde bee good) yea sometimes tene, and
eleven times: so in Egyp: (as Aristotle telleteth) they bræde
all the Winter long. And though Hennes are more fruitfull in
laying of Egges, yet Pigeons are more profitable by often
bringing forth young: and therefore you must provide you such
breeders, whose bodies be great and faire, not too old, nor too
young, of a good and perfect colour, and a fruitfull kinde. It be-
hoveth him that will begin a Dove-house, not to begin with the
young and little ones, but with the breeders, and to buy so ma-
ny Cockes, as he doth Hennes, and to keepe them if he can,
matched together of one Nest: so if they be so matched, they
will bræde a great deale better. They bring forth commonly a
Cocke and a Henne together (as Aristotle writeth) and our ex-
perience sheweth it. In March they begin to bræde, if the wea-
ther

ther be warme, before. There is no Bird scutfuller then the Pigeon, and in softe daies she conceiveth, layeth, and sitteth, & brings up, and that for the most part all the yere. Wher layeth two Egges, and when she hath layd the first, which is a Cocke, the next she layeth, which is a Henne, the third never lightly commeth to god. Both the kindes doe alwayes sit, the Cocke in the day, the Henne in the night, they hatch in twentie daies, they lay after five treadings. In Summer they somtimes bring forth in two moneths thare paire: for upon the nineteenth day they hatch, & presently conceive againe. And therefore you shall often finde among the yong Pigeons, Eggs some readis to hatch, and some flying: if there be no Cockes, the Hennes will tread one another, but the Egges never come to god, but ate winde Egges: Aristotle and Theodosius calleth them water Egges, whereof there never commeth any thing; and because the young ones will bide at five moneths olde, we suffer the first flight to flie, to increase the bide: as being hatched in March, will bide againe in July, or August. Those that we meane to take so, the Hitchin, or the Market, are best to be draivne at the latter time of the yere, when they are woxst able to defend themselves from the cold, and from Buzzards, and Crowes: the best for bwoed among all fowles, is the March bwoe. They that mean to fat Pigeons to sel them the dearer, do sever them when they be newly feathered, & fadre them with chalwed white bread twice a day in Winter, and thrise in Summer: and such as ha now hard pens, they leave in the ffeet, plucking the feathers of their wings, and breaking their legs, that they remoue not from their places, giving the damnes god plenty of meate, that they may better fide themselves, and their young. Some (as Gellius witteth) doe softly tye their legs, so if they shold break them they thinke the paine would keape them from satting: but this tyng doth little god, for while they struggle to get themselves loose, the labour will keape them from being fat: but their legs being broken, the paine will not remaine above two daies, or thre at the uttermost, and will keape them that they shal never stray from their places. Some use only to pinio them, but so fall they many times out, and become a prey to vulture: and therefore it is god to bring them to the Hitchin,

before they be full ripe. The unfruitfull and naughtie coloured, & the otherwise faultie, ought chiefly to be sattet, and must be crammed in such sort, as you crammme Capons. Dove-houses or places for Pigeons, to builde in, are made after divers man-
ners: for the tame Pigeons, and such as are fed at home, they make in the highest parts of their Houses lying toward the South, certaine hollow Rumes, and Cellars for them, and if the place doe not so serue, driving in certaine Pinnes into the wall, they lay upon them frames of boord, with partitions in them, or earthen pots to bред in, letting certaine Ledges runne from hole to hole, that they may the better come to their Nests, and walke up and downe in the Hume. But the houses for the other wilder kinde, because they containe great numbers, are built after a more handsomer order, although under the Choy of houes, and in Steeples of Churches, you shall have thousands bредing. Varro appoints the Dove-house to be built in this sort: a Colzie adioyning to the house, and well lofted and staled above, with one little doore in it, and sone windowes, answer-
ing the sone quarters of the Heaven, which windowes must be well grated, so as they may give light enough, and keepe out vermine. All the walles within must be faire white limed, for with this colour is the Pigeon wonderfully delighted: besides it must be well pargetted and plaisted without, specially about the windowes, so as neither House, Warell, nor other Vermine may enter: the windowes must be so placed, as they may let in the Sunne all the Winter, having a hole of sufficient widenesse over against them, well netted and tunnelled, in such sort as the Pigeons may easily slie out and in at, and yet not suffer any hatefull Bird to enter: so the Pigeon taketh great delight in flying now and then abroad, where after she hath recreated her selfe, shē commeth with ioy to her nest againe: as on the other syde she moueneth, if she be restrained of her li-
bertie. Round about the wals within you must have little round holes, from the top to the bottome, wherein they bред. Varro woulde have them thre handspans in length, and ledges from hole to hole for them to walke upon. Some thinke it best to make your holes of Lome, or Lime and not of Bricke and Stone, as many do, because of the warmth. Others be some that builde their

Their Dove-houses upon pillets in the midst of some Pome, or great water, both because they delight in water, and because they will have them safe from vermine. The meat that they most delight in, is Lates, wilde Fetch, Pease, vnt heat, Millet: where these be not, you may give them Sperry, specially in winter, Rape seed, and Cockle: so by gathering & pecking up these little seeds, they get themselves a heat in cold weather. When you give them meat, you must throw it hard by the walles: for that part is commonly cleanness from dung. And though Varro bids you to swape and make cleane your Dove-houses continually, & that the dung is good and profitable for the field, yet seeing this kinde of fowle doth delight in places sprinkled with their owne dung, you shall not neede to be carefull in clensing of it.

There is nothing better for the preservation of Pigeons then is the Saltcat; which is a great round Ball of Stone or Salte bought either at the vnt hitches, or else the Saltwaterman, but the best of those is that which is drawn from the Salt-peter, & therefore at no time let the Dovehouse be unfurnished of one of these.

If your Dove-house be either new begun, or weake ned by mischance, or unprofitable for want of Companie, you shall take the fattest Doggs you can get, and when he is slayed and Bowell-ed, stop his Bowels as full as it can hould with Cominseds, & so coat it dry, basting it with sweet Wine & Honey mirt together, and then place it in the Dove-house: this will not only perswade those that are in the Coat, but wil intice as many as shall finde in the fields with them to follow them & come home also.

Looke well that they be not staid, or disquieted with Gunes, or noise of people, or other like, specially when they sit: if you have occasion to goe into the house, see that you doe it about none time, when they be abroad a fadding, and be sure to knocke well before you come in. Some say, that it will cause them to love the house, and allure others to come thither, if you sprinkle them with Commin before they goe to fadding, or perfume the house with Sage, and Frankensence. Some have another experiance for this purpose, and that is Potsherdes beaten small and searced, mingled with the herbe Coast, and good old Wine, & given unto them. Others take Barly flowre, sodden with drye Figs, and a part of Honey. Cardan teacheth this, as the best

The Dogga
Roasted.

The fourth Booke,

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To this purpose, of Barly or Millet, of Cummin, of Coast, of Agnus Castus, of Song, of sin Louys, or morter of god Muskadel, boile them all together, and make a stome of them to be set in the middest of a houle. Tragus teacheth to take the rotes of the Chigell, and to boile them with the pickle of Herring.

There is a kinde of Hawk, that naturally is farrable to other Hawkes, and preferruch the Pigeon: the common people call it Castell. Columella affirmeth, that if you take the yong Castells, and preserue them every one in earthen vessells wel covered and plastered all ouer, and hang them in the corners of the Dobe house, it makes the Pigeons haue such a loue to the house, as they will never for sake it. They haue many other aduersaries, Crows, Dawes, and Owles, which all destroy the Pigeons, specially when they braid. I found of late in mine own Dobe house, an Owle sitting solamly in the Nest upon her Egges, in the middest of all the Pigeons, and harp by the house on an old hollow tree, I found pieces of young Pigeons, that the Owles had brought to feare their young with: and though the Owle came to be greater then the Pigeon, by reason of the thicknesse of her feathers, yet will they creape in at as little a place as the Pigeon will: so small and littie is their bodies, though they be bombarred with feathers. Against Woles, Stotes, and such like, Palladius would haue you hedge the Dobe house about with sharp prickly branchs void of leaves, as Cox-Wyers, & such like, as they daue not passe through for pricking. Dydimus and others, do bid you hang great branchs of Rue all about the house, specially at the entrance of the doore, or to put wilbe Rue under their wings, or to sprinkle them with Rue: for this heathe (as they say) hath a speciall force against such hurtfull vermine. Some say, that if a Woles head be hanged in the Dobe house, it will daue away all hurtfull vermine.

But I will now leaue the Pigeons, and speake something of the Pheasant, and of their excellency. Palladius teacheth, that you must provide such as be yong & lustie, that were of the last yeres brynging forth: for the old ones be never fruitfull. One Cocke is sufficient for two Hens: they braid once a yere, & lay to the number of twenty Egges, beginning in Apill, and some where in March, but they are better to be brought up under a Henne:

Henne: so as you set under one Henne fistane Egges, observing the time of the Spone, and the number of the daies, as I told you before of the Henne. The thirtieth day they come forth: so, the first fistane daies you must feed them with Barly-floure tenderly boyled, upon which you must spinkle a little Wine. After you shall give them Wheate, Grasshop-pes and Antes Egges: let them not come neare the Water for catching the Pippe, which if they chance to have, you shall rub their bellies with Garliche stamped together with Corre. They are fatted in thirty daies, with Wheate-floure, or Barly-floure made in Pellets, the Pellets must be spynckled a little with oyle, and so put into their throats: you must take herte you put it not under their tonges, for if you doe, you kill them: neither must you give them any meate till you perceiue the first be digested.

And as thus you order the Pheasant, so you may also order the Partridge, for these are creatures of so nere alliance & delight to one with another, that you may haue both in one roome, having in the corners thereof little close boxes, whereinto they may runne and hide themselves, for they deſire to lie close & untroubled, in the midſt of this Roome you shall place ſundry wheateſheaves, ſome with the eares upward, and ſome with the eares downward, & neare unto them Mallow tubs with ſwete water: if unto this Roome doe adioyne any ſafe grasse plot where they may walke at their pleasure, they will poynt much the better, & ſade a great deal the ſooner*. Now next unto these I place the Turtle. *Turtle*, of which Columella affirmeth, that Turtles will never lay, nor bring forth in the house, nor Partridges: and therefore they used to take them wilde when they were full ripe, and to ſade and fat them in little bathe roomes like Pigeons holes: the old ones be not ſo good, as neither the Pigeon is. In Winter you shall hardly haue them fat, in Sommer they will fat of themſelves, ſo they may haue plenty of Wheate and Coare: the water muſt be very cleare and fresh that you give them. They hold opinion, that the Turtle after he hath loſt his mate, continueth euer after solitary. There are great ſlare of them in England, & especially in Hartfodshire: if they be payred and that the male & female may liue together, they will indure any Imprisonment

In prisonment, and are as fit to be kept in Cages, as any biche whatsoeuer, and if your Cages be large enough as commonly Garden Cages are, you may keape twentie payre in one Gage*. But because there is greater store of Thrushes & Blackbirds, we care the lesse for keeing of Turtles. Though Thrushes and Blackbirds be kept in divers places: yet as Plinie saith, there is in no place greater companie, then is taken in the Winter time in German. What they were used for great dainties, appears by Horace:

No daintier dish then is the thrush.

They are commonly dressed whole, and not drawne, so their inward partes may well bee eaten, so they be new: their Croppes are commonly full of Juniper Berries. Varro wryteth, that Thrushes were in his time at twelve pence a piece. Where they use to keepe them, they also put as many as they take wilde among the others that they brought up before, by whose company and fellowship they passe away the sorrows of their prisonment, and fall to their feeding: so you must alwayes haue old fellowes for the purpose, by whose example they may learne both to eate and drinke. They must haue warme houses, as your Pigeons haue, crossed through with small Perches: for after they haue stolwen about, or haue fed, they desire to rest. The Perches must be no higher then a mans height, so as you may easly reach them standing upon your fete. The meate must be cast in such places of the house, as lie not under the Pearches, for siling of it. Columella and Palladius write, that unripe Figgis beaten and mingled with Wheate, flowre must be given them, that they may eate thereof their fillies.

But in England, & other Countries, they place in their Cages divers Tronghes of which soms they fill with Pepps, Hawes and other Winter Berries, some with Hempseed, some with Linseed, some with Rapesede, some with flesh chopt small, and some with water*. Aristotle maketh many kindest of them, among which he also putteth the Colmons, that feede vpon Octapes. Our Thrushes do feede for the most part upon Juniper berries, which their Croppes being opened (as I said) doe shew. They

use

use also in many places to kepe Quailes, which is rather a ^{Quale,}
Bird of the Earth then of the Ayre (as Plinie saith) but because
they fade upon El lebo, & venomous fieds, and beside are vexed
with the falling sicknesse, many doe marueile (as Athenaeus
writeth) why they be so greatly esteemed. They say their
young must be fed with Antes, and Emmets Egges, as the
Partridge. It is thought, that he lieth over into other Coun-
tries in the Winter time, as the Crane, and the Stork doth,
following for the guide their oldest Quaile, called the mother
Quaile.

But howsover this be the opinion of the Ancients, yet we
 finde by daily experiance, especially in these Countries where no ^{The Swan.}
such poisonous & unwholsome fodes grow, that the Quaile is
a most excellent & valtie Bird, both in the dish at great feasts
and in the feld for sport, and pleasure, either with the setting-
dogge, or her flight before the Hawke, or in the taking them
with the pipe or call, to which they are wondrous apt to be in-
ticed. This Bird if you meane to siede it to any extraordi-
nary satnesse, you shall put them into little low, flat, yet large
Cages, having the one side open like a grate, and before it little
troughes, into one of which you shall put fine Chilte wheate
and into the other cleare water, and give them a little at once
but be ever and anone feeding them; and to the ende they may
be the better obserued, you shall place these Cages in such a
place as you or some others may have occasion continually to
pass by them, and thus in a soynight or thare wikes they will
be wondrous fat.

But before I passe further in this discourse, I must not forget
to speake something of the Swanne which is a principal Fowle
of esteem, and is brought up in the Lodo-Countrys, & kept in
great numbers in Lincoln-shire, a Country replenished with
Gentlemen of god houses, & god house-keepers. And Atheneus
alleging the authoritie of Aristotle, accounteth this Fowle
to be very feitfull, and of great Romache, so much, as it is
thought they dare give battailes to the Eagle. They are born
and kept in Lakes, Ribers, & fish-ponds, without any charge
at all, and no great good in the Ribers by plucking up the
^{heads,}

Wodes, and other annoyances: for the excellency of his downe, and daintiness of his flesh, he is greatly esteemed: There is one excellent kinde of them, that taketh his name of the god march that he hopeth, and is always cherished and kept in the Witch of Cities, and fortresses, for his great faithfulness in giving warning. They be kept almost in like manner as Geese are, but that they use to sit longer, sitting a whole moneth or thers about: they bring so th selidome above eight, and so many did my Swannes bring me, and so vntyme ffe. They make their Nests hard by the water, of Hedges, Woods, and like stuffe: their young ones they carry straight into the rivers. If the Lakes and Streames be frozen in winter, you must house them. This Bird is counted among such as live longest, vse shewing her owne death, as Plato and Martiall witness, with a sweet and lamentable song.

Now for the feeding and satting of the Swanne, which is a noble and prime dish at any great feast, you are to understand that they be the Cignes which are to be fed, and not the ale Swane, heinsoever some are of opinion that the old one is a dish above all dishes, but setting that excellency apart, when you take up your young Swanes, you shall put them into a close pond and of which they cannot get e, hating only some little dry grasse, plot to sit in and to paue themselves, neare to the verdie of this pond you shall place three Tubbs, in the one you shall put good old dry Dates, in another some Halfeine of Wheate and Barley mixte together, and swimming in water, and in the third some old dried Halfe: on these let the Swannes feare at pleasure, and once or twice a weke cast upon the water, some hot Smitte Braynes which will both scouer and feare, and there needes a moneth in this manner as a sufficient time to sat any Swanne thoroughly and cleanly, where as to feare them in houses and dry places as many doe, the Witch being a much defiled creature, with her one Ddure, and being naturally (without the helpe of water) very uncleanly, they can neither feare nor prosper, and aske double attendance to small purpose.

Feeding of
Mearnes & others.
Now having spoken thus of the Swanne and her feeding, I will speake a word or two of the feeding of other fowle, which although

although they live not naturally, and continually in the water, yet they live not from the water, and of these I account the **Hearne** one of the chiefeſt, because they are nouished for two principall cauſes, as ſo; the flight and ſervice in the viſhē. Now to ſpeak of their nouiſhment (ſo; of their hauke) I am not to meddle, because they are fowles of that liberty, and plenſtie, and ſo unþoper for any tame accommodation, that it is loſſe of la-bour to deale with them) you ſhall understand that if you will goe to the leaſt charge, you ſhall take them ſo; Buy them from their Nelliſts in their firſt pen-feathers, and then put them into a cloſe honie, which the larger it is, the better it is, and the more barnelike to the better purpoſe; for they muſt haue many Croſſe Waulks, Beames and other artiſciall places to pearch upon; At the bottome of the Horne, you muſt haue ſundry Boordis of a large compaſſe with Rings and Tenteris, whereto to binde the meate wherewith you ſeede them, and amongſt thofe Boordis as many ſhallow Tubbs of water, wheron to drinke and bath at pleaſure, and about thofe tubbs (a little re- mote) god ſtore of ſand and ſmall Gravell. To the other dry Boordis, you ſhall tye the fleſh on which they ſeade, which would be the liuers and fielhy intrails of all ſorts of Butchers Cattel, alſo all manner of Dog-fleſh or any garbage that is ſweet what- ever, as hearts, lardineis, Cyſteones, Ligheſ and the like. And this muſt be don twice a day at the leaſt, but if thrice it is much the better. This feeding house muſt be ſo opened at the top that what raine fulleth may light therin, for without much moſture they canot proſper; beſides you muſt haue great care to the cleane and neate keping of the house, for although the ſe Fowle be of themſelues ſuttish enough, yet they delight in cleanness when they are in impriſonment. Now there is from theſe creatures a double imployment, the one for the entertaining of the Gerkalcon, Falch or other Haukers by the way of Etaines or made flight; the other for the hytching at ſolemne feaſts and entertainments. If you will haue them for the flight, you muſt haue at the top of the house, at one ende a cloſe Lover or hole which you may open and shut at your pleaſure, out of that hole or Lover ^{Making a} Lover ^{night.} you ſhall ſorce one of the Hearnes, and by ſeatyngher, ſo; ce her into the open fields where you ſhal marke her, ſo; where ſhe ſitt lights

lights, she will hardly stray farre from that place, especially if there be any Hemmell, plathes, or other succowe full with water. Then at the Evening or any other time you may make your sight at your pleasure. Thus as you bring up, seide & make sat these Hearnes, in the like manner you may bring vp & sat, both Busts, Quills, Beameows or Busters, yet h Butter is best to be fed by h hand, because when they have fed, you may tye up their backs, being a fowle that naturally wil cast up his gorge after he hath fed, if he be not prevented.

Feeding of
the Curlew
and other
Fowle.

There are another Rank of fowles which are much more daintie & of greater price then any h hath bin formerly named & that is, h Curlew, h Crat or Knot, the Godwippe & h Cray, Plover; & these you may take fro their nests when they are yong, or else at moulting time, & bring the up & seide them as sat or latter then any other fowle, either by cramming them, as you do crammie Chickins with small crammies made of wheat meale & milke, or otherwise with fine chitterwheat, being fed plentiously therof thirt times a day, h is, Morning, & Noone & Night, & be sure to let the have great stroe of water: & obserning this order you shall be sure to have the sat in a soxtights space at h utmost; Thus I have spoken (as I suppose) sufficiently of all manner of Land & water fowle which are behouefull for the husbandman either for his family or otherwise for his extraordinary entertainments.

Off Fish-
ponds.

Now it falleth out in good order, that soon talking of winter fowles we shold come to entreat of fishponds, and fish. The best making of ponds, is either by the sea: or else to have them from some great streme or River, that may bring in both water fish, which by Floud or Hulke may let in alwayes fresh water, not suffering the old to corrupt, but alwaye refreshing it, and bringing more fish. The next in godnesse, are those that are fed with pipes or secret passages under the ground, and may be let out againe by holes. And therfore the water (as I said) must be well inclosed with good Bayes, Bankes, and walles, that they may be able to abide the rage of the floods, and the water. The worst and last kinde, is such as are made in Lakes, standing Poles, or raine waters. These kinde of ponds though they be the worst, by reason of their uncleane stinking and corrupt water, yet where there is no better, are to be made account of; so; though they be not the wholesomest for keeping

keeping of Fish, yet they pold some commodity, and are most necessary about the house, eyther to watering of Cattell, hipping of Cuse and Duckes, and washing, and other like uses; but if so be you can make them eyther by the See, or nere some great River, so as the water may be let in and out at your pleasure. And whensoeuer you open the holes, to let out the water, be sure that you have them well grated, that the Fish can by no meanes passe through, and let the passage, if the place will suffer it, be made on ebery side of the Pond: so the old water shall best hold, whensoeuer the streame bendes, if the currant lye against it. These salutes or Passages, you must make at the bottome of the Ponds, if the place will so serue, that laying your leuell with the bottome of the Pond, you may erre the See, or River, to lye seaven fute higher: for this Columella thinkes, will be a sufficient leuell for your Pond, and water enough for your Fish. Howbeit, there is no doubt, the deeper the water comes from the See, the cooler it is, wherein the Fishes most delight. And if so be the place where you meane to make your Pond lye leuell with the him of the See, or the River, you must digge it nine fute depe, and lay your Current within two fute of the toppe, and so order it as the water come in abundantly: for the old water lying under the leuell of the See, will not out againe, except a greater rage come in: but so the Pond that is subject to the flood and ebbe, it is enough if it be but two fute depe. In the banks and sides of these Ponds, you must have Bushes and Creeke-holes for the Fish to hide them in from the heat of the Sunne: bushes, old hollow trees, and rootes of trees, are pleasant and delightfull harbours for Fish. And if you can handsomely convey them, it is best to bring from the See, little Rockies, with the Weeds and all upon them, and so place them in the middest of your Ponds, and to make a young See of them, that the Fish may scarcely know of their imprisonment. About Turwan in France, and in other places, you shall finde Loughes and Maine-water, even in the Wilberness and Heathes, great abundance of Fish. In divers places of the low Countries, where they have their Ponds fed with the River, which they may shut out at their pleasure, they so order them,

as they be either environned, or bedived with deeper ditches, wherein the fish hath line in the sommer time: and the rest of the ground betwixt the ditches (the water being boideed and kept out by Hilles and Bankes) is soiled with summer Cyne, and after Harvest, the water let in againe, whereby the ground being wonderously enriched, doth yeeld great Croppes of Barly and Summer Cyne; and (as the Poet saith) for the land, so may be said so: the water, Not every ground for every seed, but regard must be had, what soe every one is mett. The Romans keepe in their Ponds Lampreys, Oysters, Luces, Pulletts, Lamprons, Gyltherdes, & all other Fish besides, that are used to be kept in fresh waters. Ponds for Oysters, were first devised by Scrgius Orata, at the Waynes, about the time of L. Crassus the Dator, before the Battaille of Marse, not so much for delicate, as for the commodity and gains. Cockles and Musles, were kept in Ponds by Fulvius Hirpenus. Moreover, divers Fishes delight in divers places. The best Pikes & Luces were thought to be in the Riber of Tyber, betwixt the two bridges: the Turbots at Ravenna: the Lampreys in Sycil: so Rivers, Lakes, Poles, and seas, in some places haue better fish then in others. But to retorne to my fish ponds from whence I came, neyther may all sorts of Fishes be kept in every one, for some sorts are gaudelers, delighting onely in Craneelly, Idong, & sandy waters, as Meadowes, Cudgins, Bulheads, Russes, Troutes, Perches, Lamprons, Crevisses, Barbels, and Chevins. Others delight againe in muddy places, seeking ever to lie hid in the mud, as the Wench, the Cele, the Beame, the Carpe, and such others. Some againe delight in both, as the Pike, the Luce, the Carpe, the Beame, the Bleake, and the Moach. The Craneelly Fishes, specially the Penones, are ingendred of shelles dung, laid in small Baskets in the bottome of a Craneelly Riber.

The Luce, or Pike grove (as likewise both the Carpe) to be great in a short time, as in thare or fourte paures, & therfore in such Ponds as haue neyther the sea, nor Riber comming to the le, lie every fourth or third yere, to drawe the old, and to stoe them with young. And in these parts we chiefly stoe them with Carpe, having small ponds, and foylins for the purpose.

to kepe them in, so as you may come by them at your pleasure.
I will not enter here into any large Encomiums, touching
the praise of this art of Angling. It shall suffice me that all men
know it, that few good men but love it, and a world of pore men
like by it; neither will I stand upon the use and vertue there-
of, because it is eyther for profit or recreation; nor upon the Anti-
quitie, because no man living knoweth the beginning; nor upon
any thing that is linked unto it by the Curious. I will onely
tell my selfe upon the Art it selfe and fully as the shaxtnesse of
the time and the shyness of my spach will give me leaue, de-
liver unto you what I know therein.

The Art of Angling or the art of deceiving fish, consisteth
in these few prynciples. First the man, the Instruments, the
Wayes, and the Reasons good or ill for the purpose.

Touching the man, holsoever some would fere upon him Of the man,
twelue vertues, some twenty, & some more, some lesse, yet I must
contradict them and say, if he be Tullies honest man, he is then the
Anglers sufficient man; there is required in him much patience
and constancy, the one will take from him Angutsh, the other
error; he must love the sport earnestly, for No Love, no Lucke;
he must have humble Thoughts and humble Gestures; for he
must not disdaine to knaile, to lye grubeling, to stand barethead,
nay to doe any humble action to attaine his purpose: he must be
of a strong constitution, for he is like to undergo the worst ter-
rors of Tempests. Lastly for his apparell it must be iacute
and wholesome, not garish or glistering, the one is wholesome for
his Body, the other is much offensive to his sport. For as the
fish is of a most pure sight, so they are of a most nice conceit,
and where they once take offence, no flattery can reconcile
them: therefore his apparell must be fair and dñe coloured like
the water, plaine and close to his boote, and inside so like a
shadow that it will giue no shaddow.

For his instruments they are Anglecons, lines, Calks, hooks Of instru-
and other pocket Instruments that belong to one or all of them. ments.

Anglecons are of divers kinds as some of one piece, as those Of Rods.
which are for the Pike and other great devouring fish, and
those are commonly made of good ground Pavell, being of
an equal bignesse at both ends. Others of two pieces,
being

the body of a fine grovning gronw, whitened wth an Oyne, and the top of a small gronw, wpsell well season'd, straight and tough, others of twa, thre or more pieces, and these commonly are made of Canes one abegge leste then another, and so let in one into another into strong & close wll laundered Sockets; & the top of a strong smooth & pliyant whalebone: & inwde those Woods are the most sufficient for any ordinary Angling whatsoeuer, & because there is so great choyce of them to be bought almost in every Haberdashers shope, I will not trouble you with any further relation of them, but leave them to your best election.

Of Lines.

Next the Anglecodde are Lines, some of hayze and some of silke, and both of hayze and silke, and these lines are various as any thing whatsoeuer belonging to the Angler. Some (as those which are for the smallest Fish) being twissted of thre hayzes, some of five, some of seaven, some of nine, and the biggest are but of eleven. To the line of thre hayzes you may adde one silke, to that of five you may adde two, & to the greatest number of all, you shall adde but thre silkes at the uttermost: so the length of your lines, though the ordinarie size be betwixt thre and fourte fadome, yet you must proportion them according to the depth and breadth of the River wherein you Angle, and according to your place of standing when you Angle. The white hayze and the gray hayze are the least discerned in the water, & so the best, the blacke yeilds too much shadow and so doe both the Russet and Latunie, yet is the greene exceeding good in some waters, especially where there are many weds and flowers.

Of Corkes.

Next to the Lines are the Corkes; warning givers when the Fish byteth, and these varie little in their shapes, but much in their bigness, the least Corke belonging to the least line, & the bigger to those of bigger quantity: the tallich of the Corke in generall is like a penne with a quill turning through the midst, in which the Line passeth, and is fastned by a wedge made of another quill, it is to be let higher or lower at your pleasure: there be Corkes made of other tallichons, some thatye ar bothe ends, some flat, some round like an Apple, but none are better then that which was tell of all described.

Of Hookes.

After all these I place the hookes, which are the most material instruments of all other; and are of the greatest diversitie of

Shapes,

shaptes, so they are almost as severall, as the severall sortes of Fishes, yet all of one matter and substance, that is to say, of strong Steele wpter well hardned. I could here enter into a large description of the manner, forme and fashion of making them, and how both to temper them & to sound them; but because they are so generally to be bought in every Shop, I will save that la-
bour, and referre you to the makers and sellers, who for six pence
or a shilling will furnish you for many yeres, and shew you
which is for the small Fish, which for the great, which for those
of middle size.

As thus you may buy these bare hookes, so you may also buy
all manner of Flies for every month in the yere, and for every
Fischt that biteth at those baits, especially the Trout, the Cherbis,
and the Barbell. Now if you will be so industrious to make
these things your selfe, then having provided Vlper, Silke, wolle
Feathers, and the like, lay but the examples before you and un-
dooe one, and you shall finde it most easie to make an hundred.

Now lastly, under the name of those which I call pocket In-
struments, I comprehend all other necessary adjuncts, as a Box
for your Flies, a Board for your Lines, and Plumb to sound
the depth of water, a large Ring to unfasten the hooke in the
water when it is intangled, a bag of red cloth for wormes, a
bone for Maggots and Bayts of that nature, a Care for live
flies, a case for Needles, Thimble, Silke and Thread, for ware
and loose bayts, a pouch with many purses and curious shrip
to herein to carry all your gettings.

The next thing now, which sould be in place are Bayts, and
the generall uses of them, and of these there are an infinit num-
ber, every Fish in a manner taking delight to feede on severall
meates, I will briefly therefore turne over the names of most
of them and only touch and pitch upon those which are most
materiall; the first baites then are wormes of all kinds, the
Gentill, the Bob, the Dace, the Scartab, Frogge, Grasshopper,
the Spaine of waspes, & Hornets, the young brood of Bees, small
Snailes, Roches, Menolues, Millerthumbe & the like, then there
are dead bayts, as paste, clotted blood, Beasts livers, Coxne,
Chesepacings, Bramble berry, &c. and ebery one of these habe
their severall seasons & severall Fishes, as the Worne, the Bob,

Of Bayts.

and the Dore are good for small fish & middle fish in May,
the huckens flies in June, the Spagot in July, Snailles in Au-
gust, the Grashopper in September, and so likevise of all the rest
as you may finde out by experience.

But not to puppelle your selfe & your memory with many mul-
tiplicities and confusions, you shall then understand, that if you
Angle for delight and for the conquest of the cunning fishes which
are not the greatest, then if you Angle in a small Brook
and a gentle streame, then your onely excellent Bayte is the
red Veloze; but if you Angle in a great broad streame and
deep channell, then there is no Bayte comparable to the Ma-
got and the Hobwoze; If you Angle for greater poyson Fish
of higher estimation, whether it be in small or great streams,
in standing lakes or still waters, there is no Bayte compara-
ble to carke and strong Esser chese, as else Esser chese beaten
with fine white head cruns to a gentle past, for there is not
any Fish that swimmeth which will refuse to bite at this if
it lyes in her walke.

Of good
and bad sea-
sons to an-
gle in.

Now after all these knowledges it is meete that our Angler
be well experienced in knowing which seasons be good, which
hast for the practise of his Art; for to runne blindfold into a
business, or to doe things out of season, is to obetyssion that you
most affre, or like folly, to cut downe the bough on which you
stand. Therfore you shall understand that it is not good to an-
gle in the Sommer time (which I account from Appill to Octo-
ber) in the extreme heate of the Sunne, as from nine a clocke
in the foremorn till thre in the afternoon, nor by any meanes
after this in the evening, for in those houres the Fish are longe
and will not bite; all other houres are proper for the recrea-
tion, provided you begin not much before Sunnise, nor continue
long after Sonne set; a shrouched imme is profitable, both ana
will drive fish into their holes. A dache cloueday is good to
angle in, so isuarine ayre, wet deires and gentle showers.

It is good Angling after land tempests and overfloodes of water,
the Rites being drawne againe within their stone Banks &
the water neily purged from uncleaneesse. And lastly in all your
Sommer angling obete ther to chuse the coldest houers and
the deepest brookes.

Now touching your seasons for the winter Angling, which is Of winter's Angling
 accounted from September to March, you are to doe all things Contrary to your Sommer Angling, that is to apply your exer-
 cise in the strength and heate of the day, as at highnone, or from
 nine in the morning, till thre in the afternoon, and to let passe
 both the darke frostie morning and the colde unpleasante even-
 ing; for all manner of fish are of a subtle qualite & wil hardly
 bite but where they may discerne, and that makes them to so-
 beare when by the too much brightness of the sunne they dis-
 cerne too much, as in the Sommer, & by the want of the sunne
 and day they discerne too little as in the winter; and therfore
 obserue you a meane betwixt these two, and you shall hardly
 erre. Now you shall heare also understand that as this winter
 angling at highnone (which I reckon from eleaven a clocke
 to two) is generally good in most places; yet it is most good in
 ponds and standing waters that are deepe, thicke and soule at
 the bottome, so that in the heat of the day, neyther Spar, Mord,
 Line nor hooke are transparent. Againe, if you angle in Rivers
 that ebb and flow, as our Thames, Euent, Haudene and the like;
 If it be where the Tide runnes high and strong, then the
 best season for Angling is in the ebbe or falling of the water;
 but if it be where the Tide is scant and doth no more but bring
 the River to a glorie, there the best angling is at the flood, for
 shallow and transparent waters, like weake Judgements, lay
 open their intentions and so are perceaved; when deepe shounes
 like deepe Judgements, conceale their purposnes and so make
 their prey blases to their intentions. Lastly, (and there is no
 thing more Authentike and certaine) when you see any fish
 play upon the top of the water, to catch at flies, and to smache
 and lische upon the ayre, or when you shall perceave the pike
 to shooe and pursue the smaller fye, and that the Woch, the
 Dace, the Gougen and the Venole are chased from their
 haunts or little pits of their aboad, then I assure you is a
 most excellent time for Angling; and when you see any
 thing contrary to these things before declared, then keape
 up your Angle, and bethaine your time in other Mattered.

*of Fishes
Haunts.*

The next thing now that falleth in my way, is to speake something of the haunts of Fishes and where they live and make their abode: so to sake (as the proverbe is) a Needle in a bottle of Hay is a pleasure so unpleasurable, that no man will pursue it: therefore if you be a schollar, new entred into the schoole of angling, and would begin with the smaller sort of Fish, and such as are both most frequent, and soonest deceived, as are the Gudgeon, the Koch, the Dace, the Whitting, the Loach and the Bullhead, then you shall know that their haunts is (for the most part) in shallow streames, which are bright and transparent, where the pebble and sand may be discerned, yet full of little pits and obscurties where they may dive downe and lye hid from devoures, so Pudde and ouie places they care not, and though they doe and will live in ponds and meares, yet it is constraint and necessity, not free will, neyther is their Fish sweete or pleasant (as these in the River) but hould the taste of the soyle where they live slaves and not free denisons.

If you will angle for Cales, the best angling for that sport is upon the heads of Hilles, within the Damnes, close unto weares, or upon dyers Stayes, and such like places, and as neare as you can immediatly after some inundation or overflow of water; or instantly after Thunder or Tempest: so upon these occasions they breake their beds and raigne abroad, and then they are so eager they will bite at any thing; Now in this action you must have your line very strong, as of eleven haynes and one silke, yet therewithall very short as not above eight foote at the most; it must be plumed with good stoyes of Lead, so as it may rather sink into the Huppe, then float any thing above the Huppe; the hooke must be pretty and round, but in any case no Corke at all, for you must understand that you must in no wise strike till palpable you sake the Cale to plucke: now must you doe that action rashly neyther, but with great discretion hould the Line onely silke and no more, and so suffer the Fish to play her selfe wearey, and with patience and suffurance draw the prey unto you. The onely Wayte in which

The Cele takes delight, is thered verayne, and next it littel pieces of Shapēs guts, and for want of these, your rankie Cōser-chēse hath no fellow. Thus in as braſe words as I can I have delivered unto you the whole ſubſtancē of this Acte; I will now proceſſe and ſpeakē ſomething of the nature, uſe and benefit of Bees.

Beacauſe I will not haue our diſcouer of husbandry depraiſed and mayned of ſuch a profitablie member, whose uſemay in all places, br they never ſo deſert, or barren, be had, I think it good as a conculſion to the whole, to ſet you the manner of haſping and ſordering of Bees: for the godly husband by cheriſhing of them, picketh out many times a god piece of his liuing, yet, the poore ſoule of the Countrey that hath no ground to occupie, may raife hereof and that without charges, a great commoſtie. Merula reports, that Varro had pietely for the Reit of his Bees, a thouſand gallons of Honey: and that in a house in Spaine, having not paſſing one Acre of ground to it, hath pietely bene made of the Bees, foire ſcōne pounds worth of ſware and Honey. This little poore creature the Bee, doth not onely with her la-
bou'ret yield unto us her delicate and moſt healty Honey, but also ^{Industrie} with the god example of their painfull diligencē and ^{of Bees,} trabaile, encoageoth man to labour and take paines according to his calling: in ſuch ſort, as it ſeemath the Almighty and moſt excellent Majestie, hath of all other ſpeciellie created this little poore creature, for the benefit and commoſtie of man: by whom beloues the commoſtie of the Honey and ſware that they make; we might take both example to ſpend our life in vertuous and commendable ex-ercises, and alſo to honour and reverencē the wonderfull bouny and godneſſe of the moſt gracieous Lord therewards us, in the creation of this ſmall and profitablie Monſie.

They are continually busied in labouring, they ſhow great conning and hōb/kemanship in their trabailes: they haue aliancēs amongst them the lively Image of a perfeſt Common-wealth, they yield obedience to their Prince, not liking the gouernment of ſundry heade, but loke to be ruled by one each one of them laboureth and travayleth in his charge, in ſo much, as

Bees their
Common-
weales.

The Birds
of the
Muses,

as the iwilfull Gobernours & Councillors in Common weales, haue taken the Muses for their patterne in choosing of Princes, distributing of Offices, rewarding of vertues, and punishing malefactors. Varro his aliuaines call them the Birds of the Muses: and Virgill with wonderfull colours, both eloquently set forth the Muses, their Common weale, Palaces, Builidings, Jades, Pamiers, Clares, and Crabales, supposing them to be partakers of reason, and that they haue some instinct from above, in that they so neare resemble the mindes of men, yea, many times excell them. If the King be taken, the whole Swarwe is had: if he be gone, they disperce themselves abroad, for they cannot live without a King, hating as well the heauie government, as the subiectio[n] to many heads. If the King, so (as he teache him) the Spurster King die, the whole Swarwe amayeth, and mourneth, they straight waies cease from gathering of Honey, they stirre not abroad, but onely with a heauy and sorrowfull humming, they swarwe and cluster together about his booy. The nature surely of this p[er]ye creature is greatly to be wondred at.

Their Princes pallace is sumptuously built, in some sevral part of their Ilydes, being mounted aboue the rest, which if you happen to brise, you destroy the booy. They liue all as it were in a Campe, and duely keepe their watch and ward, working together, and oftentimes senting abroad their Colonies, they are inwarmed at their Captaines appointment, as it were with the sound of a Trumpet, by whiche they know hoch their times of warres, and truce: they ward all the day time at their gates in warlike manner, and haue great silence in the night, till one of them in the morning humming out the discharge of the watch, they get them abroad to their busynesse: & when the slepie time of the night comes in, they make lesse and lesse noyse, till one of them goeth about with the like sound that he gave in the morning, setting as it were the watch, and giveng them warning to goo to rest: at which time they all suddenely hold their peace. In the morning (as I said) at the discharge of the watch, they roame straight to the gates, but flye not abroad, except they see the weather will be faire: whereof by nature they haue perfect understanding.

Being

Being laden, they fly with the winds; if any tempest suddenly arise, they counterpoise themselves with little stones, flying in the winter as neare the ground as may be: their labour, both at home, & abroad, is certainly appointed. They labour at the first within the compass of three or four paces about the Hive; when the flowers there have beene sufficiently brought, they send abroad their discoverers to finde out more fower. And when they fall all together to their busynesse, some workes the flowers with their feete, others carry water with their mouthes, and drappes in their little flees: the young lustie fellowes labour abroad, the elder at home. Those that bee abroad, be with their shoulders late all their Thighes, which naturallly the more hath Massough: thus being loaded, Legs, Head, Watch, and all therewith as they may beare, they returne home, whence these labours, mony thare or four at the doore to unload them. Within, all this while are some laying in order, some building, some making cleane, and some making ready their meat: for they laboure, ralily, for feare of beguiling one the other. They frame their houses archwise within the Hive, with fewe pillars, so they may enter one way, and goe out another. Their coynes that they make are brought full of holes, in which holes (as Varro saith) are their Cellis or lodgings, made every one sixe square, according to the number of their feet: these Cellis they doe fill with Honey, filling every one in a day or two. These cannes are fastened to the upper part of the Hive, a hong little upon the other, not cleaving to the Hive, being now cornered, now round, according to the fashion of the Hive: as both Plinius reporteth, & I shall hereafter shew you, when I speake of the framing of the combs. The Combs are kept up from falling, with small pillars and propes bolstir, so built as they may bee vsed about to repaire them. The thair first losst of their Cellis beneath, are left empty for fear of the Hive: the uppemost are as full as may be, such as are lossterns and idle bagabones amoung them, are noted, and punished with death.

Aristotle maketh many sortes and kinde of them, wherof he counteth the short speckles, & small kinde to be the best: and next to them, the long ones like waspess: the thicke, the kinde that you call the Wives, with a very large house: the fourth, the

The punis-
ment of
lossterns.

The
there.

The kinds
of Bees.

Drone,

The
Drone.

Breeders.

The best
sorts of
Bees.

The shape
of their
king.

What to
be confis-
tered in
buying of
Bees.

Drone, being bigger then all the rest, wanting both his King and courage to labour: and therefore they use to make at the entrie of their Hives small Gates, wherein the Bee may enter, but not the Drone. And the same Aristotle, in the chapt. before, saith, that there are two kindes of Kings v. Maelster Bees, the one of a golden colour, which is counted the best: the other blacke, and partie coloured: they be twise as bigge as the other Bees, the tayles of them as long as one and a halfe of the other, they are called of some, the Mother of Bees, as the chiefe breeders, because the young of the Drones are breeded without a King, but the other Bees never. Virgili following herein Aristotle, doth most commend the little, long, smooth, and faire Bee, who making mention of two sortes of Kings, he describes the worser, whereby he shall doe no harme.

Destroy (saith he) and let the other live,
Whose golden-hew dots glister in the eye:
And deckt with glistening scales, fair she doth give,
yf differre in gresse, and surer more Majestie.

And as there is two sortes of Kings, so is there of the other Bees.

Some ugly scurie, and some againe doe shinc,
Bedight with drop of golden colour fine.

Being milke and gentle: for the Bee, the greater he is, the worse he is, and if he be angry, and sticke, and round, he is worst of all. And because (as I said before) the best are onely to be medled with, sith the good and the bad are alike chargeable, and require like tendanee, and speciall hede to be had that you mingle not the bad with the good: for lesse will the encrease of your Honey bee, if some of your Swarmes be ill matched. You may keepe your selfe with Bees thre manner of waies, either by buying them, taking the wilde Swarmes, or making them by Arte. Such as you buy, let them be of the kinde and shape that I told you of, and be sure before you buy them, that the Swarmes be whole and greatly which

which you may judge by looking into the Hive, or if you cannot be suffered so to doe, you may guesse it by other tokenes; as if so be you see great numbers clustering at the doore of the Hive, and if you heare a great buzzing and humming within: or (if they be all at rest) putting your lippes to the mouth of the Hive, and blowing therein, you shall easily perceiue by their answering sound, whether their number be great or no. In buying them, besides, you must looke whether they be sound, or sicke: the signes of their being in health (as shall be shewed when I speakes of their diseases) is, if their Swarmes be great themselves saite, and well coloured and wroke lustily. Againe a token of their not being well: as if they be hayzie, looke loathsome, and daftly, except at such time as they labour: for then they waxe leane and rough, with extreme travell. You must make your conjecture likewise by their age, such as are not above a yare olde, looke saite and smooth, and shyne, as if they were Dyed: the old ones are both in sight and feeling, rough and rugged, and by reason of age, wrinkled: which neverthelesse, for cumming in making their Combs, experiance, industrie, and shillfulness in the weather, doe farre passe the others. In any wise see that you buy them rather from your next neighbour, then from a strange Countrey, or farre off, for they many times perish by Change of ayre, or shaking in the carriage. And if you be driven to carry them farre, take heed you neyther iogge, nor turstile them: the best way to carry them is upon a mans shoulders, and that in the night time, suffering them to rest in the day, and powzing in to them such sweet things as they delight in, keeping them close. It is better removing them in the Spring, then in Winter: so they doe not so well agree with winter. If you remoue them from a good place, to a barraine, they will straight wayes bid you farewell, and forsake their Hives. When you have brought them to the place where you meane they shall stand, if it be day time, you must neyther open them, nor place them till it be night, to the end they may after the quiet rest of the night, goe chearefully to their wroke the next morning. Be sure to marke them well besides for two or thre dayes after, whether they goe all ouer or no: for if they doe, it is a shrowd signe they will away. sometime, if the place be

Transpor-
ting of
Bees.

The trans-
porting of
Bees.

good

god, you shall assay to stote your selfe with wilde Bees: for although the Bees (as Plinie saith) cannot be rightly tamed eyther wilde, or tame, yet Varro calleth them wilde that brade in wilde places, and tame, such as we kepe at home: and affirmeth the manner of keeping them to be divers. There is great stote of the wilde sort in Sarmatia.

The greatest token of Bees and Honey nere, is where they be in great numbers about the waters: for if you see the number but small, it is a signe it is no good place for Bees, and if so be you see they come in great numbers, you may some learne where the Stockes be: in this sort, as Columella and others have taught: You shall carry with you in a shaucer, or such like thing, some redde colour, or painting, and standing nere to springs, or waters thereabouts, as fast as they come, touch them upon the backs while they are a drinking, with some little straw dipped in the colour: and tarry you there till such time as you see them retorne. If the Bees that you marked doe quickly retorne, it is a token their houses be not farre off; if it be long ere they come, it shewes they dwelle farther off: wherefore you may judge by the time. If they be nere, you shall easily finde them, if they be farre off, you shall come to finde them in this sort: Take a piece of a Rude, or a Shear, with his knots and joynnts, and making a small hole in the side, poure into it eyther Honey, or some sweet thing, and lay it by the water: and when you see the Bees haue foundit, and entred the hole so: the labour of the Honey, stoppe you the hole with your thumbe, and let but one goe out at once, whose course you shall follow, as farre as you can see him, and this shall bring you part of the way: when you can no longer see him, let out another, and follow him, and another, and after another, till you come to the place. Others use to set some little vessels with hony by the water: which when some one Bee or other hath hapned to taste, she giveth straight knowledge to her fellowes, whereby by their flying in number, they come to finde out their dwellings. If you finde the Swarme to be in some such hole, as you cannot come at them, you shall drive them out with smoke, and when they be out, bring them downe with the ringing of a lattin Bason, so as they may settle upon some tree,

To finde
out the Bees.

from

from whence you shall shake them into your Hive. If the sinarne be in some hole above in the branchos, you may save off the branch handsomely, and covering it with a white cloth, place it amongst your Hives. If they be in the body of the tree, then may you softly sawe off the tree above the Bees, and after-wards, close underneath them: and being covered as before, carry them home, stopping well the chinks and cists, if there be any. He that seeketh the Bees, must begin in the morning, that he may have the whole day before him to marke their labou-ring. Thus farre of the kinds of Bees, and getting of them: now will I shew you of the placing of them, ordering, and keeping of them. The place for your Bees and your Hives must be so chosen, as they may stand quietly and secret, standing specially in such place, as they may have the Sunne in Winter, and in the Spring time alway at the rising, and such as is neyther too hot, nor too cold: for the excede of eyther doth hurt them, but rather temperate, that both in Summer and Winter, they may have moderate warmth, and wholesome ayre, being farre remov'd from the company of eyther man, or beast.

For they most of all delight in quietnesse: beware beside, that there be no hurtfull creature neare them, as the Wode, that with his breath doth both poison the Bees, and also draweth them to him; the Woodpecker, the Swallow, the Sparrow, the Starke, Spiders, Hornets, Butter-Syes, Serpents, and Spiders.

Drive from thy Hives the hurtfull Lysart greene,
Keape Throstles, Hennes, and other Birds unrew:
And Frogne, on whose brest as yet is seene
The bloody marke of hands that Itys slew.
All these destroy thy Bees, and to their nests doe bear
Such as they take in flight, to make their young ones cheare.

Of such things as hurt your Bees, I will hereafter speak more, where I shall shew you of their diseases & harmes: in the meane time I will goe forward with the placing of them. The place where they should stand, would rather be in the valley, then be-
tween the hill, &c. The valley better for the Bees, then the hill, which sound is very noysome unto them: so shall they sit with more ease.

ase and sped to the highest places, and come laden downe a gaine with leſſe traſe. If the ſeat of the house will ſuffer, it is good to have your Bees ſtand neare your house, and to be encloued with a hedge, or a pale : but on ſuch ſide as they be not annoyed with the ſent of ſinke, pydie, or dunghill. The beſt ſtan ding, is within the ſight of the maſter, by whiche preſence they are ſafest kept. For their better ſafety (if you feare them) you may ſet them a yard or more from the ground, encloſing them with little grates left open againſt every Hive, or ſo lettisid with hone, as a Bee may eaſily come out and in, and eſcape both Birds and Water: or if you liſt, you may make a little house by ſo the Baſter, wherein you may lay your Hives for your Schwarmes, and other neceſſaries miect for your Bees, ſetting neare to the Hives ſome Haddowing Treas for them to ſwarme upon.

If it may be, let them haue ſome faire Sping neare them, or elſe ſome water conveied in a pipe: for without water they can neyther make Honey, nor breed up their young.

Round about the Bee-hart, and neare to the Hives ſet hearbs, plants, and flowres, both for their health, and profit: ſpecially ſuch as are of the swarkeſt and delicateſt ſamour: as Cithylus, Lime, Cassia, Rosemary, Habery, Smallage, Violets, Sage, Lavender, Myrche, wilde Marjetum, wilde Lime, Walme, Swete Marjetum, Hawken, Beanes, Muskatsel, Popper, Hellilot, & Roses. And if there lie Ground neare it for the purpoſe, ſow it with Rape ſeade, and Beechwheat: for they wonderfullly delight in the flowres hereof. Plinic wriþeth, that Bees delight greatly to haue Brome flowres neare them: of treas they moft delight in theſe. The Wine, the Willow, the Firre tree, the Almond, the Peach, the Peare tree, & the Apple, and ſimilair as the flowres therof, of be not bitter. Of the wilde ſorts, the Terebinth, the Lentile, the Lind-tree, the Cedar, and the Hallholme. The beſt honey (as Palladiuſ ſaith) is made of time: the next of wilde Lime: the third, of Rosemary. You muſt remove from your Bees, the Pew tree, Bay, & the Cornel: Plinic would alſo hate the Olive away. Vaniſh alſo all the kindeſs of Spurge: for with that, as alſo with the flowres of the Cornel, they fall into a Flixe and die. Beside you muſt ſuffer no Wormewood, nor wilde Cucumber to grow neare

Faire wa
ter neceſſary for
Bees,

Hearbs
that Bees
delight in

nearre them, for they bath destroy the Bees, and spoyle the hony. And because the flowre, or scut of Climes bath specially hurt them, theresoze in such parts of Italy where plenty of Climes grow, the Bees do not long continu. Touching your hives, they are made of divers fashions, according to the manner of the country. Some are made round, some square, some thicke foot in height, and one in beth, made very narrow toward the top, least the Bees shold overlabour themselves in filling of them. Some make their hives of Lanterne horne, or Glasse, to the end (as Pliny saith) that they may view the manner of their working. Varro maketh mention of earthen hives will plaistered within and without with good Dredging, so as the roughnes & ruggednes cannot displease them: but for all that, the earthen hives be the woorst that may be, because in Sommer they be too hot, and in Winter too cold. The best hives, are those that are made of Cork, Wicker, or rindes of trees, because they kepe out both cold and heat: the next are such as are made of straw and Wents matted together, two foot in beth, and so much or more, according to the number of your Bees, in height. In some places they make them of one piece of wood, cut and hollowed so: the monce, or of ioyned boardes, five or sixe foot in height, and these neither are too hot in Sommer, nor too cold in Winter. Of these wooden hives, the best are those that are made of the Figge tree, Pine, Ashe, and Walnut, of such length (as I told you) and a cubit in breadth. Besides, they would be covered with either Lime, or Dredging: for so (saith Florentine) you shall kepe them long without rotting. You must also bore them through stopewise, whereby the winde gently entring, may drye up all cobwebs, & such like noyses: You must alwaies have god store of hives lying by you that may be removd, and easly carried where you list: so: the fress, or standing hives, be discommodeous, as whiche you can neither sel, nor remov: though Celsus saime to cominend the standing hives, because they are neither subiect to stealing, nor burning, being made of Wricke, Loame. It is enough to haue three rankes of them, one above the other: for the keeper shall haue enough to doe to overlake the uppermost. The part where the Bee doth entre, must stand a little lower then the hinder part, so as the raine can not come in, and the water (if there be any) may easly boide.

A a

And

Hearbs
noysome
to Bees.How you
must place
your hives.

And because colts both more annoy the Bees, then pease, you
shall attune your hives well besytide, against the hot and bitter-
neſſe of the yelveth wintre, And let the Swanne come boymifully
to them in the Front. And therfore it is bett for you to make
the holes where they come in and out, as small as you may, that
they ſuffice onely for the vngnells of the Bees, partly for a boord
of colts, and partly to keepe out the Crows, Ratts, Butterfles,
Wats, Spates, and ſuch other buttell deuine, that would o-
therwife deſtroy the Combis: wherfore it is god you haue two
or thre ſuch ſmal holes together in every hive, ſo the commodi-
tie of the Bees, and to reſtraine the enemie.

When the
Bee reſteſt.
The be-
ginniſg
and order
of his tra-
vaille.

Thus having declared unto you before their coile, their di-
gence, and other of their teavalie, I will now likewife tel to you
what time they begin to labour. In the winter time, from the
ſetting of the ſeven ſtarres, tyl the beginning of the ſpring, they
keepe their houles, and come not abroad, by reaſon of the cold:
in the ſpring, they come ſtraight aboad, & ſince that time for-
ward (if the weaſter let them not) they ſet bett ray. First of
all, they frame their Combis, and ſtarre, that is, they make their
houles and chambers, wherof they make ſo many, as they think
themſelues able to fill, then fall they to buiding, and laſt of all,
to making of honie. Their Ware, they make of the flowres,
fras: & plants: their honie, of the gins and clamminesse of trees
that are cleare as Willowes, Elmes, Wren, Juniper, Cumme, and
Hopen: A riſode ſalſh, they make their Combis of flowres, their
houles, of Cummes, and thei. Many of the beſt of the Ayre, that
fallēth chiefly at the riſing of the Rattes, and that there is no
honie made before the riſing of the ſeven ſtarres, & their combes
of flowres, and that the Bees doe not of themſelues make the
honie, but onely gather the honied dew that falleth, becauſe the
keepers ſince the Celles to be filled in ſome one, or two daies: &
that the houle being taken away in the end of Summer, the
hives are not found to be furnished againe: though there be
flowres enough at that time. This, and much more þerof
(ſaith Aristotle) whom Plini following, affirmeþ honie
to be made of the Ayre moſt of all, at the riſing of the Rattes,
chiefely the Dogge ſhining out early in the moring: there-
fore you ſhall ſee in the moring betimes, the leaves of the
trees

trees bedecked with honie, as you shall likewise have the Apparrell, Wayne, and Beareas, of such as habe biene early abroad in the morning. Our Common people call it Manna, or Honey. ^{Manna.} bee, cleaving to the leaves before the rising of the Sunne, as it were snow, or rather Candied sugar. Whether it be the sweat of excrement of the Heavens, or a certayne spittle of the Starres, or a myce that the ayre purgeth from himselfe; howsover it be, I wold to God it were such as it first came from above, and not corrupted with the vapours and damps of the earth. Besides, being sucked up from the leaves by the Bees, and digested in their Bellies (for they cast it up at their mouthes) and also distempered with the heat of the solidores, ill seasoned in the Hives, and so often alced and transformed, losing much of his heavenly vertue, hath yet a pleasant and speciall celestiall sweetnesse in it. The best Honey is of Lime (as I have sayd before) and good likewise of Cichoris, of the Figge Tree very pleasant: Varrio saith, they take not their sustenance, and their Honey both from one. A great part of their foode is water, which must not be farre from them: and must be very cleane, which is greatly to purpos in making of good Honey. And because every season suffereth them not to be abroad, they must at such times be fed, least they shoulde then be forced to live all upon the Honey, or to leave the Hives empty. Bees ghe unto them Water, and Honey, sonder together in little bellies, putting into it Purple wolle, through the which they sucke it, for feare of winking too much, or drawing themselves: others dry Figgies, either stamped by themselves, or mingled with water, or the drise of Grapes, or Raisins mingled with water, and toke meat therewith, or with Honey: Beside, I have some times use (but in my foyne without reason) to give them May Seal. Whereupon, as the Bees require great looking to continually, and their Barberys aye attaintance, so most of all they crake diligent regarde, wherenthey are about to famishe, whereunto if you have not a great god eye, then will this you fare well, I make a new Barber. As such is the nature of Bees, that with every Prince, is had a Commonwealth, which as long as they are able to travail, doe as it were vildaine the government and fellowshippe of the old

The best
Honey of
Time,

Bees, their
Winter-
foode.

Going a-
way of
Bees, and
the tokens
thereof,

Going a-
way of Bees,
and the
tokens ther-
of.

old Bee, which most hapmeth when the Swarmes be great and lustie, and that the old Stagers are disposed to send abroad their Colonies : and therefore you shall by two tokenes specially know when the new Princes with their people will abroade. The first, when as a day or two before they cluster and hang (specially in the evening) about the mouth of the hibe, and same to shew by their comming out, a great desire to be gone, & to have a King, done and Countrey by themselves : which, if you prepare them at home, they content themselves very well with it. And if the keeper provide not for them, taking themselves to be greatly iniured, they depart, and seek a new dwelling. To prevent this mischefe, Columella willes you to looke diligently to them in the spring time about eight of the clocke, or at none : after which houres they commonly goe not away, and to marke well their going out and comming in. The other signe is, that when they are readie to flye, or going, they make a great humming and noysse, as Souldiers ready to removre their Campe. At their first comming out, they flye aloft, playing up and downe, as it were tarryng for their fellowes till all their company come. Yea, many times the old inhabitants, being wearie of their dwellings, doe leabe their hives, which is perceived when they come so out, as none remaine behinde, and presently mount into the ayre; then must you fall to ringing of Pans and Bassons, to feare, or bring downe the run-awayer, who being amazied with the great and suddeine noysse, do either presently repaire to their old hive, or else knit themselves in swarme upon the banch of some tre to the place: then must the keeper out of hand be ready with a new hibe prepared for the purpose, and rubbed with such heathes as the Bee delighteth in, or sprinkled with little drops of honie (I have sene in some places used Creame) and so shaking them into the hibe, and coveting them with a shidle, let him leaue them till the morning, and then set them in their place. He must (as I told you before) have divers new hives in a readynesse to sette the turne without. And if to be you haue no trees nor bushes growing neare the hives, you must thrust into the ground certaine boughes & branches for the purpose, whereupon they may knit

Bees delight
in new
hives.

and settle themselves, and rub ober the boughes with Balme, or such pleasant hearbs, that when they (as I say) knit and settle, putting under the hive, and compassing them with some little smoke, you may cause them to fall into a new Country: for they will rather goe into a new hive, then into an old: yea, if you offer them the hive that they came from, they will forsake it for a new. Some of them will suddenly leave the hive, without any carrying, which the keper may perceive, if he use to lay his eare in the night time to the hives: so about thre dayes before they goe, they make a great noyse, like shoudiers ready to raise their Campe.

Signes of
fiddaine
departing,
and reme-
dies.

And therefore when such noyse is heard, they must be very wel watched, whether they come out to fight, or to fly, the keeper must be at hand: their fights, whether it be among themselves, or one hive with another, are easly stickeled:

A little dust cast up on high,

Doth end the quarrell presently.

Or Honied water, swet wine, Broath of Reasins, or any pleasant liquor, wherin they delight, cast and sprinckled amongst them both straightwaires part them. The selfe same remedies makes two Princes of them, being fallen out, to be quickly good friends againe: for when there hapneth many times to be in one hive sundry Kings, by whose dissencion the whole number of the subjects, in the Princes quarrels, goe together by the eares, you must by all means sike to remedie it, least by cibill dissencion, the poore people be destroyed. And therefore if you perceiue them often to fight, your best is to hil the headdiest of the dissencion, and to appease the fury of the fighters, by those meanes that I told you before. And when the Partiall swarne is settled upon some branch of a tree, looke if they hang all together like a cluster of Grapes, which is a sygne, that there is either but one King, or if there be more, they be agreed: then you shal not trouble them, but take them into the hive: but if so be they hang in two or thre clusters, like the Paps or Tidders of a beast, it is a sygne there are divers Master Bees that agree not together: for which you shall seach where you see the Bees to cluster most. Therefore annoitng your hands with the juice of balme, or Beewort, that they may abide you, thrust in your fingers softly amongst

Divers
Kings in
one Hive.

The shape
of the
King.

To kepr
the king at
home.

The Drone.

Time for
taking the
Combes.

hem, and the dving the Bees, search well till you have found the rynge, leader of the dissencion, whom you must take away. Wher the shewfision and shape of the King is, I have told you a little before. It is, something yonger then the other Bees, and lesser winged, of a faire and glistering colour, smooth, & without sting. Yowbeit, some of them be shagheare, and ill coloured, which are naught, to be killed. Let the beth (as he smith) weare the Crowne, who must himself also be deppised of his wings, if he be too basse headed, and will alwayes be carrying his people abroad: so shall you, with the losse of his sayles, kepe him at home spight of his teeth, while he dare not for want of his wings venture out of the doxes, & so shall he kepe his people at home. Dydianus wylteth, that the Bees will never go away, if you rub the mouth of your Hive with the dung of a new calved Calfe. To the same end serbeth it, if you stamp the leaues of wilde Olives, and Garden Olives together, and anoint the Hives in the euening therewithall: or if you wash the Hive & the walles with honey sodden with water. When an old stocke is come to a small number, & that there be not Bees enough to furnish the Hive, you must supply the want with a new Swarめ, destroying the King of the first Swarめ in the Spring, so shall both the swarms dwell together in amitie with the old Parents, as shal be shewed you hereafter, where I meane to speake of repaying the stocke. The Summer being past, ensueth the time for taking of Honey, to which hasten the traualle of the whole tendeth. The time for gathering thereof, Columella teacheth to be then when we receive the Drones to be driven out, and banished by the Bees: for thence they Drive the drouis Drone away. This Drone is an untemely birth, and an unperfet Bee, but very like unto the Bee, save that he is bigger bodied, lying always idle in the hive, not labouring himselfe, but sadding like a lubber on the sweat of his fellowes, yet serueth he for the harding and bringling up of the young: which when he hath done, they thrust him out of the hive. Varro appointeth three seasons for the taking out the honey: the first at the rising of the seuen stars: the second in Sommer: the thirde at the setting of the seuen stars: this signe is when the hives be heade, and that they be double furnished. You may make your conjecture by the Bees, when they make great noise within

within, and when you see them stand dawning, and playing at their dores, as also, if looking into the hives, you perceve the mouthes of the Combs to be covered with a Honey filme, Dydimus thinketh it to be the best time at the first harvest; the rising of the seven Starres, or the beginning of May: the second, the beginning of Autumn: the third, the setting of the seven Starres, which is about October: howbeit, these times be not alwaies precisely to be obserued, but according to the forwardnesse of the season: for if so be you take the honey before the Combs be ready, they take it ill, & presently leaue working. The time for gelding or driving your Bees, is early in the morning: for you must not at none trouble your hives. For this kinde of gelding of your hives you must haue two instruments for the same, a stot and a halfe long and more: the one of them must be a long knife of a good breadth, having at the end a bending crooke to scrapre withall: the other must be plaine, very sharpe, that with the one you may cut the Combs, and with the other scrapre them, & draw out whatsoeuer dreggs or filth you finde in them. And if your hives be not open behinde, you shall make a smoke with Galbonum, or dry dung, being put into an earthen pan made for the purpose, small at the one end, from whence the smoke shall come, and broad at the other, from which you shall blow up the smoke from the fire, in such sort, as Columella sheweth you. This pot you must suffer at the first, to smoke into the hive, & afterward round about with, but, & so shall you drive them. He that medleth in this case with the Bees, must specially keepe himselfe from letchery, & drunke[n]nesse, and wash himselfe cleane: for they loke to haue such as come about them to be as puce and cleane as may be. They be light in cleannessesse so much, as they themselves doe remoue from them all filthinesse, suffering no filth to remaine amongst their labours, raking up in heaps together the excrements of their owne boordes, which in the rainy daies, when they walke not abroad, they remoue and throw out of the hives. If you set Garlick by them they will stink all that come narde them: Their anger is chiefly all waaged by the presence of those that use to them, at whose comming they walke milder, being wel acquainted with those that are their keepers. If there be two swarnes in one hive, and agreed together, they haue two sorte, and manner

Gelding or
driving the
Hives.

Bees haue
theives and
uncleane
persons.

Fashioning
of the
Combes.

of Combes, every swarme observing his owne order, but all the Combes so hang by the twises of the hives & sides, as they touch not the ground where the Bees use chiesely to walke, as I said before of the building of their Combes. The fashion of their Combes, is alwaies according to the fashion of their hives, sometimes square, sometimes round, sometimes long as the hives are, in which they are fashioneed as in a mould. Plinius in his tenth booke, that there were Honey-Combes found in Germanie, of eight fathoms in length; but howsoeuer they be, you must not take them all out, but must use discretion in taking of them. Amongst our people in the first Bee harvest (if I may so terme it) they use with their crooked knife, to pare away no more but the empty Celles, till they come to those that be full, taking heed that they hurt them not; & this they do in the spring. In the latter harvest, that is, at the end of Summer, they take the Combes full of Honey, in such sort, (as I told you) burning the old Bees, & alway keping & preseruing the yong swarmes. In the first taking, whē the Meadowes are full of floweres, they leave the fist part of the Combes behinde: in the latter harvest, when winter approacheth they leave a third of their Combes for the sustenance of the Bees. But this quantity cannot certainly be prescribed for all Countries; but must be measured according to the abundance, or want of floweres. Dysdianus Thaseus, thinketh good to leare them a tenth of their Combes in the Sommer time, if the Hives be very full, otherwise, according to the proportion; and if they be empty, not to meddle with them. Plinius would not have the Honey of the Spring time (which he calleth flowerie Honey) to be medled withall, but to be spared. Others leare no Honey at all for them, becaus of the abundance of floweres that are then springing, which is the chiese foundation of their Combes. Such as be shiffllest doe leare the Bees a twelth part of their labour: and this they doe about thirty dayes after the swarne, which they make an end of commonly in May. The old and the corrupt Combes, are for the most part at this time taken away: and the sound, and such as are filled with Honey, left. In taking of the Honey at the latertime of the yere, they use to destroy the oldest stocks, to save the charges of saving of them. This drawing and gelding of hives is not com-
monly

monly used in the Countrey, but they rather, according to their custome, at the end of the yers burne them, alledging for their authozitie an old English Proverbe of their owne :

Drive Bees, and lose Bees : burne Bees, and have Bees.

And in some places they doone them. When you have thus spoiled your Hives, you shall carry all your Combcs into some handsome place, where you meane to make your Honey, & stop up all the holes and crevisses of the walles and windowes, as close as you may : so the Bees will be very busie to recover the prey. Wheneuer you take your Combcs, looke that you strain out the honey the same day, while they are hot & new. The honie that you take at the full of the Mone (as Plinius saith) yeldeþ most, and the sayzer the day is, the thicker it is. The Combcs being taken out, let them rather be warme, then heated, least by over-heating them, you straine out the Mare with the Honie : afterward, put them into a god strong bagge, and with a Presse or other Instrument made for the purpose, or with a Wicker Basket, press out the Honie ; but see that before you presse it, you never stirre it with Combcs, as habe in them young Bees, called with some, Gubbes, or any red or rusty dross : for these with their evill iuyce corrupt the Honie. When the Honie is thus strained out, it is put into earthen vessells, & suffered to stand uncobered a few dayes, til it have wrought, & cast up alost all his Dregs, which you must often scum off with a little sticke: but in many places they are not so curios, but tumble all together, & so sel it grosse as it is. The best Honey is alwaies in the bottome, as the best Wine aloft, and the best Wine in the midſt.

The best Honey was in the olde time thought to be in Athens. and in Sicil : it is now thought very good that commeth from Moscouia, and the North-east Regions. The Honey at the beginning is thin as water, and after the straining, it worketh like new Wine, and purgeth : at the twentieth day, it warreþ thicke, and afterwards is covred with a thin rime, or flime, where the froth of the purging is gathered together. The best Honey, and least infected, the Bee doe gather from the leaves of the Oke, the Lind tree, and the Hick. There is three sortes of Honey, the best kind is that which is called Autum, or floreþ.

The best
Honie.

Three sorts
of Honey.

Sloiuze-Hony, made in the spring time: the next, is Summer hony, or hasty-hony, made in thitty dayes after the tenth of June when the Dogge begins to come in: the third is Heath-hony, a wilde kinde of hony, and not allowed, being gathered after the first shoures of Autumnne, while the heath is sloiuzed: & therefore like the sandy hony. The best hony (as Diophanes saith) is cleare, yellowish, smooth in touching, and fine, coping, if it be drawen in length, long sticking together, clammy, & hard to be got asunder: the hony that is of the woorst making, is to be boyled. Bread cor-
rupceth Hony.

The ma-
king of
Waxe.

Their age (they say) may thus be knownen, such as are not above a parte olde, doe shine, & looke as they were newly opled: the old ones be rough, shaghad, wrinckled, loathsome, and ill favored to looke upon, howbeit, for making of Coames, these are the best. Aristotle in his booke before mentioned, affirmeth that

The age of
Bees.

Bee

Bees live six or seben yéars, and that if a stocke continue nine or ten yéars, the keper of them hath god lucke. Pliny writeth, that one stocke was never stene to continue above ten yéars, nor though you supply the places of the dead every yéare with new : soz commonly in the tenth yéare after the first hiving, the whole stocke dieth. And therefore to avoide the mischiefe of being utterly destitute, it is god to encrease the number of your hives with new swarmes every yéare. And if so be your Bees, through sudden forme, tēpēl, or cold, lie dead upon the ground, you must gather them together into a platter, or a broad bason, and lay them in your house toward the South, specially if the weather be god; after, cast amongst them Ashes of Fig tree wood, being something more hot, then warms, shake them gently up & down, so as you touch them not with your handes, & so setting the into the Sun, they will (as Varro sayth) quicken again. To whom Columella subscribing, addeth, that such Bees as you finde dead under your hives, if you lay them up in a dry place all the winter, & bring them out into the Sun in the spring, when the weather is faire, and sprinkle them with the foresaid Ashes, they will recover within a few houres. They that lik, may prove it. I have not hitherto tried it. Marcus Varro holdeth opinion, that Bees are engendred sometime of other Bees, & some times of the body of a young Bullocke putrisse, reciting this Bees. Epigramme of Archelauſ.

To revive
Bees that
be dead.

Of Steere that strangled is are children strangely bred,
Of Hoſte ingondred is the Waspes, and Bees of Bullocke dead.
The Horses breed the Waspes, the Bullocks breed the Bees,

For a young Dre, or Sterre, being strangled, corrupted, and cast into some ſuch place, where the putrifid vapour cannot breath out, and ſome of hearbs and flowres, agreeing with the nature of the Bees thurk into the body, as Time, Cassis, and ſuch like, wherewith the vapour may be tempered, you ſhall hereof quickly have Bees, even as you may of the body of a hoſte likewiſe ordered, have Waspes and Hornets.

The manner how Bees are engendred of a Bullocke, Virgill Bees made
doth largely diſcoule out of Mago, and Dembericus. You muſt of a Steere.
ſtaine a little house foursquare, about ten cubits in breadth, & as
much in heigh, with ſome windowes, an every ſide one. A yong
fat

sat fatte being brought up hither, his Nose, his Eares, and all other open vents stopp'd, & filled with linnen dipped in Pitch, must be beaten with numbers of clubbes to death: so as both the bones and the flesh may be broken without any blood: soz of the blood cometh the Wex. Afterward, the house being daepe strewed with Lime, & the Bullocke laid upon his backe, the dozes and the windowes must be close shut up, & so plastered, as there can no airc enter. Thre weekes after, the windowes must be opened on every side, save where the wind bloweth strongest, & the light and the airc let in: when it hath bin wel coled & refreshed, the windowes must be shut up again, & made as close as before: and being opened the eleventh day after, you shall find the house full of Wxes, and nothing left of the Dre, save the hornes, the hayze, and the bones: they hold opinion besides, that the Wxes are engendred of the braine, and the other Wxes of the body.

Signes of
Sicknesse in
Bees.

The signes and tokens of their health, as if they be lively, quiche, and many in number: if their workmanship be neatly and equally wrought: if they goe about their busynesse chearefully, and if they looke faire and smooth. The signes of their not being in health, is, if they looke loathesomely, beough & hayzie, except in the time of their labour, when they commonly looke like labourers, or be drowsie, or if you see them carrying out of dead carckasses, and following the cozes after the moutners, or that you heare no noys, nor stirring amongst them. These signes when you see, Columella willeth you to give them meate in little troughes of Reedes, specially Honie sodden, and ground with Galles, or Roses. You must also to heale them, perfume them with Galbanum, Storax and Beniamine, Reasins, or olde strigges of Grapes. If the King happen to bye, the common people waile and mourne with great heaviness, neither will they make any provision for their owne sustenance: and therefore if you feede them not, they will famish themselues.

The diseas-
es of Bees,
and the
remedies.

They are many times infected with the Pestilence, against which you have no other remedie, then to sever the Vibes fatte asunder. Their chiefeſt & eaily ſicknes, is in the beginning of the ſpring, when the ſpurge and the Lime do both flowre: foſ as upon new frutes, ſo at their firſt coming abroad, entiſed with these new flowres, being almoſt hunger staruen with the
Wintre

winter passed, they sado grēdilē as they fall into a flē, wher, of if they be not quickly remedied, they die. For Spunge doth lose the bellies of all other creatures, but the flowres of Elme bringeth only the flē to the Wē. And therfore in such Countrees, where there is great plentie of these trees, the bees cōtinue but a while. Columella teacheth you against this disease, to give them Rosemary sodden with water and Honie: some againe use to give them the stale of men, or Bullocks: as also the graines of the Pomegranate beaten, and sprinchled with Wine or Beasins, with the like quantitie of Marma kneaded together, and giben them in Sharpe wine, boyled in an earthen vessell, & poured into little Redes. Virgili describeth an hearbe, called Aumellus, with a yellow stalke, and a purple flowre, the ioyce of whose root being sodden in old Wine, and strained out is very good to be gitan them: Columella out of Higinius, teacheth to remedy them in this sort: First, to take out all the rotten and corrupt Combēs, and to giue them fresh meate and after to perfume them with smoke. It is good also to put to a decayed hīve, a new swarne, as I said before. Many times they die of a disease which they call, The great devouring, which hapneth when they have made so much ware, as they think they shall be able to fill, and afterwards, by strokē & tempest, many of them be destroyed, so that the remaine sufficeth not to fill the Combēs, whereby the emptie parts of the Combēs becommeth rotten, and by little and little infedeth both the honie and the Wēs: for which the onely remedie is, either to put in a new Swarne to fill up the cells, or if you haue no such swarnes, to cut away part of the Combēs before they come to be naught, which you must do with a very sharpe knise, so feare of displasing the rest of the Combēs. A cause beside manytimes of the death of the Wēs, is their too much prosperitie, as when there are divers yeres great abundance of flowres, and the Wēs so busie in their feeding, that they forget their hēeding, who overwearing themselves with trabaile, they die, not leaving any hōde behinde them. It is called Blaphigonia, when either by sicknesse, slothfulnesse, or barrennesse, they leaue no fruit behinde them. To remedy this: It is good every third day, to shut up the hīves close, leaing but very small holes, out of which they cannot crepe,

The fourth Booke,

scape; so shall they be forced to looke to their bosome, when as they cannot otherwise range abroad. Many times besides they see the cause of their own deaths, when perceiving their hones to go away, they feede too greedily. Their daws hong both also many times besyde them: for being touched with it on the back, they are salimed, as they cannot stirre: and Dyle bath not only kill Bees, but also all other like creatures, Flies, & Wormes. They hate all filthy savours, and stink such as smell of Dym-sigarettes: they are often besieged with Waspes, Hornets, & great Gnatis: the Swallowes both oftentimes spoyle them: the Wasp-pecker both with his long tongue, thrust into the hive, liche up their hones: & vipers other Bees (as I have said before) among them. The Louse blotneth them, and sucketh them up at their own doores, who sustaines no hurt by their Singing. Flyes are also hurtfull and troublesome to Bees, in whiche fliseen they tanghe themselves, as they can hardly get out.

Concerning In what soe they are to be driven and gilded, it is shewed before: but at this time, & till the twelvth of September, the hives must be opened every tenth day, and smoket. The hives being thus smoket, you must cōfēsh the Bees, with sprinckling & casting into the empie parts of their hives, very fresh and cold water: and if any thing remaine, not washed away, you must swiēpe it out with a Goose wing. Besides, the Mothes, if they appeare, must be swiped away, and the Butterflies killed, which dwelling in the hives, are commonly a bane to the Bees: for they both eat up the Waxe, and with their dung doe breed a kinde of Wlope that they call Hive-mothes. These Butterflies, as Columella teacheth, you may when the plowmen sowing (at which time there is greatest number of them) destroy in this sort. You must have a vessell of brasse, very high & straight, narrow necked and mouthed, in the bottome whereof you must have a light, and set it in the shewing mire unto your hives, and you shall see all the Butterflies straightwaies fall to the light, and while they play about the flame, they burne themselves, while they can neither get up, by reason of the straighenes, neare than the fire, by means of the brassen walles. Betwixt the rising of the Dogge, and of the Wearwara, which are almost sixte daies, you must take good heed your Bees be not spoyleyn by Hornets

To destroy Butterflies.

Poynets, which at that time lie in waite for them, even at their owne dores. After the rising of the Bearward, about the twelfth, or fourteenth of September, is the second harvest of your Honey: from that time, till the setting of the seven Starres, which is about fortie dayes, the Bees do proesse for their winter Rose, of the flowers of heath, Marigold, and other bushes and shrubs; of which provision you must take nothing, lest you discourage them, and drive them away: From the setting of the severall stars (which is about the entrance of November) the beginning (if we may belike Plinic) of winter, the Bees live all the winter long upon such store of Honey as they have laid up: At this time, the hives must be opened and cleared of whatsoe ver filth is in them, and diligently abroado; during the winter time, your hives must neither be opened nor stirred, and therefore in the end of summer, while the weather is yet milde and temperate, your hives being made cleane in somes sunny day, see that you chalfe under them certaine close cobers that may reach to the very bottome of the Combes, not leaving any boide space, wherby the hives shall be the warmer: When you have this done, close up every rift & open place with Clay, and Bullockes dung mingled together, batubing it all over without, leaving onely a little hole to come in and cut at. You must weare them also against the cold tempeste, with good covertures of Steele and Woods. Some use to put in the hives small Birds being drawn, which with their feathers keepe the Bees warme all the winter, & therewithal, if they happen to lacke food, they feed themselves suffiently. Yea, it hath bene saue, they have so fed upon them, as they have left nothing but the bare bones: howbeit, as long as their honey sufficeth, they never meddle with the birds. It is very god and necessary (as I told you before) to set them meat in little troughs of Woods, to defend themselves against famine. When winter is past, in the space of forty dayes, they make an end of all their honey, except their keeper deale the moze liberally with them. It hath often also bene saue, that their Combes being empie, they have continued fasting, till the fies of Februarie, and cloasing to the Comber, as if they were dead, yet have retayned their life: but least they shoulde lose it altogether, it is god to powre them in some

Not flur-
ring of Bees
in Winter.

some sweete liquors by little pipes, whereby they may sustaine their lives, till the Swallow with her appearing, promise a wel-comer season.

After which time, when the weather will suffer them, they begin to sēke abroad for themselves: soz after the Sunne is in the Equinoctiall, they never rest but travell painfull every day and gather flowres, and necessaries for their breeding.

Besides, because few places are so fruitfull, as to yeld flowres both Summer and Winter: therefore in such places, where after the Sping and Summer (at which times, both Beanes, Rapes, Willows, and other plants and heaths, in every place do flowre) the flowres doe sayle, they are carried of divers (and that in the night, as I told you before) into such places, where-as there is god stoe of late flowinge heards, as Lime, Walde Mariterum, and Waberry, wherewith they may be fed, and gather food at their pleasure: and as Columella witteth, that Bees in the olde time, were brought from the fields of Achaea, to the pastures of Athens, and so transported in divers other places, so may we with us carry them from places where the flowres be consumed in the Sping, to the Summer flowres, as Clover and such other: and after that, about the end of the Summer, to places furnished with Heath, Tamariske, and such other late bearing flowres. Soz the avoyding of this inconvenience of carrying from place to place, I will shew you in what sort I have ordred my Bee-yard at home. And because Walter Hersbach hath shewed you before in his Garden many god heards, and yet not whereto they serve, I will shew you a few plants, that I have set about my Bees, serving both for their commoditie, and the health of my household: I have chosen of a great number, such as be most necessarie, and of greatest vertue: whose speciall vertues, and wondersfull workings, given onely by the most gracious and bountifull framer of the worlde, and being as it were sucked and dralouned out by the carefull toyle and diligence of the Bee, must needs adde a greater perfection to their honie & their ware. I have first enclosed the yard whereto my bees stand, with a Quicke-set hedge made of Black-thorne and hony-suckle, the one serving the Bees with his flowres at the beginning of Sping; & the other at the latter end of Summer. The first, the

Black-thorne

entreading of Bees.

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Black-thorne bennethys pleasant white flower so much the flesher cometh to the Barrennes; it is the very farewell of the winter; for Black-thorne.
he commonly flowereth not till the winter be past. These flowers newly gathered and drupe all a night in the heat, and strongest wine, and afterwards distilled in Balme Marie, being drunke, helpeth any paine in the Liver, as bath bries certaynly prober. Therin the Germane confideth, that bath therin water he bath cures all manner of paines about the Stomache, heart, or Liver. Wine made of the folies, and preserved untill Julie, or August, when the blithe flit most raigneth, is a soberaigne medicine against it. The other, the Hone-suckle, or the Willow, Woodbine. Wine, it beginneth to flower in June, and continueth with a passing flite full the very latter end of summer. The leaves thereof will helpe and bosome, when they be vsed together at times. Strengtheth the heart of the Stomache, helpeth the Cough, and strengtheneth the heart of the heart. Ropes of Linen dipped therin, and applied to the heate of the Liver, or Liver. Rest unto thy bones, & þeraplantes the flessh brenne Marke by A plastrum, cal. Balm.

Greatly strengtheneth a greate wound, & greately helpe in every place, as soone as it cometh to the old flesch in the Country, and greatly helpe of the Liver. By Balm, or Balm, soone in white wine, & drunke therin as thou moyste together, purgeth the heart, helpe the heart-wormes, comforteth the heart, driveth away the the humpyness, & propertey of spetance. Helpeth the falling-sicknes, and alredy all other diseases: being choppes small, & dryes a night in good wodcaine, and afterwards distilled, is greatly commendado, for easyness in belly, driving away from their pangs and griefes of the Spetane, being drunke to the quantitie of thair as fonce Apponegalle, but alredy the paines of Rynning of the heart, called common-
ly, The passion of the heart, Cardiuus greatly commendeth this
herbe, for the comforting and reviving of a decaied membre
admirably, that it is a conserue of all other pleasant herbes. Rest
unto þeraplante of 3 droghting that stede and precious herbe Angelica. This herbe is in Rootes, fles, Mafe, Rake, & Sabour, to like unto Louage, as they may lawfully be distincted one from the other, þe herbe being in a droghting from the big leafes, drawing
that

For want
of Treacle,
you may
take the
whole
dramme.

that it is more iagged, and iointed evyn about. If any man
be suerely infected with the pestilence, feber, or immoderate
sweat, let him take of the root of this Angellica in powder, halfe
a dram, and putting to it a drame of Treacle, mingle them
together with thre or foure sparsfulls of the water distilled of
the said roote; and after he hath drunke it, let him lie all sweat,
fasting so shespace of thre houres at the least: this doing, by
the helpe of God, he shall escape the danger: the roote steeped in
Vinegar, and smelt unto, and the same Vinegar sometimes
drunke fasting, doth perforne a man from the pestilence: to be
short, the roote and the water thereof, is soueraigne against all in-
ward diseases; it removeth away the colletions of a pleurie
beginning, helpeth blisred and corrupted lungs, and is good
against the Collicke, Strangurie, and constraint of Urines
Purgations, and for any inward swelling, as inflammatione the
turge thrust into a hollow tooth, removeth the paine, the water
dropped into the eare, bath the like: the said turge and water
put into the eye, quickeneth the sight, and taketh away the thin
shame and paine that cometh the eye, Besides a most present
curey in all herte and reynesse, in the iure, the water or
the powder, for stiches, therin, and other such the herte with
good flesh. It was called in the old tyme Panacea, or Healeall. Next
unto this Angellica, have 3 graining in great plenty, Cardus
Benedictus, as blisfull this blisse, which all Tabytions no clymens
for sundry and great benefits, affirming that it was first sent out
of Indiale Frederick the Empereur, for the great vertue it had
against the Pestilence, by degrees being eaten as anyher.
As heinly they say, it helpeth against the Diping, as grauiness
of the head, and with a good memorie, and refresheth the hearing.
Also the parte of his great force against person, they being forth
a young mother of Powy, that hating unnesse eaten of a po-
soned Apple, and therewithall so swollen, as no Treacle, or
medicine coulde cure her, was at the least restored to health,
by the distillation of this blisse: and likewise that a
dog, into whose mouth as he slept in the field, happened an
adder to creape, was saved by the drinking of this water,
the adder creeping out behind, without any hurt to the
dogge. In fine they affirme, that the Lenten, wye, Sime, and

Cardus.
Benedictus.

and water healeth all kinde of paysons, and that the water hath
healeua inuision, whose bath has eaten hys a Banke to the
beggibins. I have afforded into the little pumpe of groundyng of
these of the herbe called Hemlocke, suppreightell, whiche exer-
cise shal be the grounde herbe, yeynding vpon a litle sand
bankes standinge directlye vpon a Banke to the water, vpon a yelte
stone, like the Canker. It is a soberaigne herbe for hea-
ling of Inuisions, not only outward amoungene fowles, but
also inwardes and biles, specially of the lungs, whereof
there bath vpon a gree pumpe. Togay sufficeth that þe bath
shal be made vpon a seuerall banke vpon a Banke to the water,
being vpon a litle sande, vpon a Banke, and a stone. It healeth
vnderstandinge of the lunges, and vpon a Banke, and may be well given
þoþt that Cough, and aþt þose breathet, and to litle chylde
vnto vþt the wie Cough, þis by reaþon of their tender age
may take no stronge medicina. I haue seene two plenties of
it growinge by the foyl of vþt trees, vþt great deuour in
þem. I haue herbe þere growing, Scabios, and þerachys that
growþ comongen to þem, with þe biggeste bane, lyinge vpon
the grounde, and thidling out in sommire a longe stalle,
with summe branches, the foliye growinge in þe knote, or
nodes, like þemp Comines. This herbe beinge fowen with
water, and poured, doþ helpe the þerachys, against þe which
diseases, the women of the country, that many times take
upon them to be great. Dostresse, in þe foyl, and still the
water thereof in May, and give it to be drunken at each time,
two or þree spoonfulls, not onely against þe þerachys, but a-
gainst inward impostumes, Coughes, and all diseases of the
breast. Against impostumes, diterus (as Tragus witteth) doe
make this composition, they take a handfull of Scabios, the
herbe boyled, of Liquefie cut small an ounce, the þine fygges,
þennell ſeed an ounce, blanched as much, þan halfe an ounce;
þese they lay a night in water: the next day they boile them, til
a þird part be conſume, and after making it sweet with
þouger, or Honey of Rose, they give it warcke in the mor-
ning and Evening: wherewith they sing, the impostume is
ripened, made soft, and couched out.

Penigrasse.

Scabios.

It is called of some Feuerium, & Veronica, and it is Gippole of Veronica.

a certaine greevyng thinge, wherof thought by the iugement
thereof, to be rounches of a great Ropellie, it is called in English
Murellia: set creppely into the grounde, as Murellaria: both, &
beneath a leafe like the Marigold chrysanthemum, a blawthy flechis
floure, whit and iude in blythe yelowe, like a commone
purple, and greevily comynely wronche rednes. D. Hieronim saith,
that the fayrelyng, is murellous against the peccallance, and
that aginnesayre report that he bindeth both alientines poches.
The mater wherof hearebe Marowyn, white wylle and wiffle,
spurkefull, by bodye wane fleschy floures, but havinge the per-
fume of galangal, no fether, eyng, wondreful fleschy. Marowyn Trans-
chirveyng, comynly wroght to be shewed gretly differten from the
Ropellie: the floures of Chrysanthemum gretly herteys gret
shame in purple, and vngrevelous blauet, herpot Cattell wif-
fren with the Cough: beinge shewed in Wylle and wiffle, it is
a most poynted remeche in all poynted godes: beinge giben
twoe cunstaines of twylle, a little Wylle, and therof into boorne
in helde, and small colered, it removeth the paine by flesch, and
distreth it from the heat. The wrene of this hearebe taken cer-
taines daies together twoe wrene of wylle helpeth the burn-sick
gribouelle of the heat, bindeth cleane, purgeth blowe, warmeth
the stomach, speneth slapping of the Liver, healeth the infec-
tion of the Lungs, and syphons, purgeth the Wombe, the spacieire,
and the Bladder; it purgeth out flesch and venome, helpeth
the Barrie, the flame of the Wynes, and other greevous
diseasen.

Caciphilata. Upon shall also lyue amongst these plants of mine, the god-
swert hearebe Cariphila, or of some Benedictis: of others Sana-
monda, called in English Aven, whose roote whether it be
greene, or else creppedly the Globe in labour: the leafe is
tagged, rough, of a harshly greene, and not much unlike to
Agrimony: the floure is yellowe, and after the falling thereof,
leaveth a quickly knoppe like a Hedgehogge: the wrene
the longer it hath groven, the swarter it is: the speciall use of
this wrene in some countries, is to be put in Wylle in the
soaping tyme: for it maketh the Wylle to taste and savour
very pleasantly: which Wylle, as many hold opinion, doth glad
the heart, removeth the obfustacion of the Liver, and healeth the
stomacke

Stomache that is obstructed with cold and grosse humours : this roots boyled in Wther & givern inward, both ease the griefe of the stomacke, or the belly, proceeding of either cold, or wind. Speke by this heathe, before 2 plantes the great water Betony, called of some Ocamisum, of Marshiolus, Scrophularia Major : it hath a great square stalk, and big leafe indented round about: the flower is in colour purple, and in fashion like the shell of a Snailie: it florisheth in June and July, and groweth most by waters in Chabotie places. Tragus teacheth to make a speciall syrropous receipt of steaming against all feareables anafores, whereunto he saith, he hath sume people so manye y^e they have Camed thereto to be cured: his instrument is this, take the heathe, roots, and all gathered in September and well cleansed from all dirt, stamp it, and strain out the juice, & keape it in a narrow mouthed Glasse well stopped, wherein you may keape it a whole yere, and whensoeuer you list to make your ayument, take of the same iuyce of Tragacanth, and Oyle, of each a like quantity, & boile them together upon a Chaffinch of coales, stirring them well, till they be incorporated, and so use it. Marshiolus tea, teacheth to make a singular ayument therof against Hernels, the Hingis chil, and the Hemerotes: his order is this. You must gather the roots in the end of Summer, and after that you have made them very cleane, stamp them together with fresh Butter & putting them into an earthen vessel close covered, set them by in some moist and dampish place, suffering it there to remaine for the space of fiftene dayes: afterwards, let the same Butter be melted with a soft fire, and being well strained, lay it up for your use. There have I also another excellent hearbe, called in Latin Cardiaca, I know no name for it in English, except you will call it Spother-root: it is indeed it is the very true Spother-root: it groweth by high waies, and neare to stone walls, it hath a leafe something like a Pettie, but more indented, the leaves next to the roots being tagged like the Croc-hote: it groweth bushy with many stalkes, I have sene it plentifully in Flanders, and some stroke of it about Maidstone in Kent: it is of great force against any sicknesse of the heart, whereof it taketh his name: it helpeth Crampes, and palsies, it cleanseth the heat from feame, it killeth wormes in the body, openeth obstrunctions,

Water Betony.

structions, procreately wrene, and *Ucromens* courses : being made
in powder, and a sponefull of it given in wine, it wonderfully
helpeth the hard labours of *Ucromens*, and all calvations, also to
calm or sette in restlesnes of stomache, and those whole stomaches retain not their
meate, to whosoeuer falle downe belching from their stomaches,
and by therewith often troublous, let them continually use Be-
tony, either the herbe or Roome boyled in wine, or the
water distilled, or the Conserue (as they call it) of the
flowres. And if so be you lacke the Conserue, or the water, you
may use the drye herbe in powder, either by it selfe, or with
honey : women that are troublous with the Spother, may use
this herbe for their remeys. To be shott, the flower, leafe,
and roote of Betony boyled and dranke, or poudered pou赤ill,
in Cleynarie, Conserue, Syrop, Potion, or Pouder, as you list
to take it, is singular good in the diseases of the stomache,
Livers, Spleene, Sibnies, and Bladder; it stretche the Patricie
from obstrukcion, and expelleth thence all hurtfull moistures.
For consumptions of the Lungs, Coughes, Dropsychies, con-
traull and purifled Fevers, proceeding from the stomache,
boyle the leaves and flowres of Betony in honyed water, and
you shall have present helpe. Thus haue I shewed you what
kinde of herbes I haue planted about my Hous, to the end
they shoulde haue fise at hande of the sweetest, and the whole-
someset: I haue shewed you also the vertues of the herbe,
the flowre, and the water, that you may use it for your owne
commoditie: onely this warning I give you, that you doe
not distill them, as the unshiffull doe, in Killes of Lead,
Winne, and Brass, which poisoneth and spoileth the water,
but in Glasse Hells; set in some vessell of water upon the fire,
whereby your water shal be most perfect and wholesome. The
difference of these two distillings, appeareth plaine: for example
in *Wormewood*, which if you distill in your common stillates,
the water cometh out swet, having gotten a corrupt quality by
the nature and corruption of the Metall: whereas, if you doe it
in Hells made of Glasse, looking that the Glasses be well closed
round about, your water shal haue the very taske, labour, & pro-
perty

party of the Weather. With these Glasse Spilles you may in respect
your selfe, as you may draw out of every heathe, the Water,
Spicte, Oyle, and Salt, to the great comfort of sick and diseas-
ed persons. I set before me great plenty of Savory, Pease, Ma-
mariske, and without the Marke, Marke, in whose flowers
the Bee much delighteth.

Pray for me to the Lord my God

That I may be delivered from

all affliction and trouble.

FINIS.

Soli Deo honor et gloria

et agnus natus in celis habet

Angels who keep us in their power

Consider where we are now in our life

And consider where we were last year

and consider where we shall be next year

For like sheep go we to our fold

And like lambs we are in our wife

Wise apply thyself to thy Master

and let thy tongue be covered with salt

and let thy hands be covered with dust

Olde English Rules, for purchasing Land.

*Who so will be wise in purchasing,
Let him consider these points following.*

First, see that the Land be cleare,
In title of the seller.
And that it stand in danger
Of no womans Dowrie.
See whether the Tenure be bond or free,
And release of every feoffee.
See that the seller be of age,
And that it lie not in morgage.
Whether a taile be thereof found,
And whether it stand in statute bound.
Consider what seruice longeth thereto,
And what quitrent thereout must goe.
And if it be come of a wedded woman,
Thinke thou then on covert baron.
And if thou may in any wise,
Make thy Charter with warrantise,
To thee, thine heyres, assignes also,
Thus should a wise purchaser doe.

F I N I S.

THE *old Cawen*
WHOLE ART OF
HVS BANDRY
CONTAINED IN
FOVRE BOOKES.

Viz.

- I. Of the Farme or Mansion House, Offices and accom-
modations of Earable gound, Pasture and Medowe.
- II. Of Gardens, Orchards, and Woods.
- III. Of Breeding, Feeding, and Curing of all manner of
Cattell.
- IV. Of Poultrie, Fowle, Fish, and Bees, with the whole
art (according to these last times) of Breeding and
dyeting the Fighting Cock, and the art of Angling;
First written by *Conrade Heresbatch*, a learned Nobleman, then
translated by *Barnaby Googe* Esquire, and now Renewed, Cor-
rected, enlarged, and adorned with all the experiments and
practises of our English Nation, which were wanting in the
Former Editions.

By Captaine *Garvase Markham*.

All the new Additions you shall find to begin with this marke  and to end
with this *.

Gratum Opus Agricolis.

LONDON,
Printed by T.C. for Richard More, and are to be fould at his Shop in S.
Dunstanes Church-yard in Fleetstreet. 1631.

The second Booke, entreating

like the Onyon, but not hollow, the stalke round, and the floweres on the top in a round tuft where the seed lyeth. Carliche groweth both of the head and the seede, as the Onyon & other of this kind doth. It is commonly sowed in February or March, according to the disposition of the weather, as the Onyon is. It would be set in the uppermost part of little narrow ridges, the Cloves being distant four or five inches one from the other, & not very deepe. After when the Cloves have put forth the little strings, or when their blads are come up, they must be well raken, for the smalles ye do so, the greater they wil be: but if you will have the heads the greater, before it grow to stalke, you shall windre & wreath the grane blades together, & tread them to the ground, for that continuall treading upon them wil make them the greater. In October the Cloves must be plucked asunder, & set in row upon high borders, that they may scape the danger of the winter stroknes. They say the scent of them will ease if you eate after them the roote of Betts tolled at the fire: thus saith Pliny out of Menander.

T H R A. What hearbe is that vonder, that commeth up so hie as a man may make a staffe of the stalke, the leaves large and round, the flower in shape seeming to compare with the Rose?

M A R I V S. Mallowes. It is Holiske, or Garden Malowin, in Latine Malua hortensis, in Dutch Peppel, in Italiane & French almost as in Latine. And it is the same that Horace taketh to be so wholesome for the body, and which of Hesiodus & Martial is so highly commended.

And also which is more wonderfull, in it the leaves turne about with the Sunne, so that it may serve instead of a Dyall, declaring by the turning of his leaves what time of the day it is, though the Sunne do not shone, which the Philosophers thinke to be done, by the drawing of his moysture. In Africa, as Pliny writeth, it commeth in seaven moneths to be like a young tree, and serues well for a walking stalke. It is sowed in October, or in the end of Summer, as also at other times, that by the comming on of winter, it may be restrained of his high groweth: it reioyceth in rich and moist ground, and

and must be remov'd when it commeth to have four or five leaves, it groweth best when it is young: when it comes to be greater, it dies in the removing. We use it both for the pot and for sallets, the taste is better when it is not remov'd: you must sow it but thinne for growing too ranke, and in the midst of them, you must lay little clods or stones, it requireth continual taking, and maketh better the ground where it growes.

Next these I place Pinclaine which is an excellent Sallet heache and loveth a settill soyle, and though it may be sowne almost in any month, yet the warmest is the best, as April, May, June or September. Buck-ashes are an excellent meaneute for them or for any other Sallet-heache, but above all they love dry dust and house sweepings; they are apt to shed their sede, whence it comes that a ground once possess of them will sel-dome want them, they may also be remov'd, and will pro-sper much the better.

The Latines call it Portulaca, with the Italians it hath the Purlaine, same name, in Spanish Verdolaga, in French and Dutch Por-chelle, it is sowed in Gardens, and well ordred doth grow the better, and spredeth the farther, it hath a blacke sede growing in little greene cups.

Buglose is at this day with the Pothicaries called Bozage, Buglose. though they differ something in the flowre, and in very deede they are two sundry heaches: for some call the common Bozage, the lesser Buglose, and the greater Buglose is thought to be that which Dioscorides calleth Cirium, the true Buglose: the flowres of both sorts are used in Sallets and in Wine, because it maketh the heart merry, and therefore is called in Greeke εὐπαρόν, that is to say, gladnesse: the leaves are also used in dressing of meates, it is sownen about March, and once sowne it will never away, there is also a wilde kinde of it.

Next are Strawberries, whose leaves are an excellent pot-Strawberries. heache and the fruit the most holesome bertie, this heache of all other would be set of the plant and not sowne, for the oft chang-ing and removing of it causeth it to grow bigger and bigger, whence it comes that we doe use to bring rootes out of

the Woods, which being set and planted in the garden, prosper exceedingly two or thre yeres together: and after, we eyther remove them againe, because they ware wilde, or set the wilde in their places: and so have we them to yeld their fruit twise in a yere, in the Hop:ing, and in the end of Summer. And al-though it groweth of it selfe in shaddowy weds in great plenty, as if it delighted in shaddow of Treas, yet being brought into the Garden, it delighteth in sunny places, and god ordyning, yelding a great deale more and better fruit: it creepeth upon the ground without a Falke with small strings comming from the roote, with a white flowre, and a lease like a Treesoile, in- bended about. The berries, which is the fruit, are red, and taste very pleasantly: the Dutch men call them Erdberen, the Frenchmen Frelles. There is another fruit that groweth some- thing higher, whose berry is also like the Strawberry, Diosco- ride斯 seemeth to call it Rubus Idaeus, the Wyer of Ida, be- cause it groweth in great abundance upon the Mountaine Ids. It is full of prickles, as the other brambles are, but soft and tender, full of branches and whitish leaves, it beareth redde berries, something paler than the Strawberry, and very plea- sant in taste. The Dutchmen call it Imberen, the Frenchmen Frambolas.

Raspes.



Liquerise.

Next this I place Liquerise or Licoriz so called of the English who (for the small quantitie they have growing) have the best of all nations: In Latine Dulcis Radix in Ita- lian Regolaria, in Spanish Regaliza, in French Reclisse, in Dutch Claries, or Sushholts.

It groweth very plentifull about the Peine, It is set of young springs of the roote: as the Hoppe is, in dyie light ground and sunne. Next this I place smal Razeins, called in Latine Ribes, which we call at this day Riber, and the Dutchmen Sain-

Small Raze-
zins

Johns pearl, because about Midsummer it is garnished with red and rich berries, having a tarte taste, quenching thirst, chiesly, the raging and extreme thirst of fevers; and coling the stomache, which the Apothecaries in Hinger or Honey haue all the yere: its thought it was unknowne to the old writers: but now a common bush used for enclosing of Gar- dens, and making of Borders and Arbours: it will easilly grow,

grow, but that it is something troublesome, by reason of his sharpe prickles to be bent about Sommer-houses.'

MARIVS. Melons (which some, because they are fashione like Apples, call Pommes) are of like kinds of Cucumbers, and so are the Pepones, which the Frenchmen call Pompeons. The Cucumbers are called in Latine Cucumer, in Italian Cucumero or Gedruolo, in French and Dutch Cucumber. They change to Pompeons, & Muskmillions, from which they onely differ in shape and greatness: when they exceed in greatness, they become Pompeons, and when they grow round, they are Melonpompeons: all these kinds are called by some writers Melons. The Grecians call all the sorts, as well Cucumbers as Melonpompeons, by the name of Pompeons and Melons, though there are some that make a difference betwene Pompeons and Melons, neither doe the learned yet throughly agree upon these names, nor can it be certaintely said what kinde the old writers meant by Pompeons, and Melonpompeons. Pompeons doe craze along upon the ground with rough leaves and yellow flower, and are pleasant to be eaten when they are ripe. The sweetest sort of them they call Succino, or Muskmillions. The Melonpompeons are supposed to spring first in Companie, being fashioned like a Quince. This kinde hangeth not, but groweth round lying upon the ground, and being ripe, doe leave the stalk.

Some Cucumbers are called Citrini, of their yellownes when they be ripe, and also Citruli, or Cureoli, they grow all in length, and are spotted as the Citrons are: some be called Marin, and be called in Italian Cucuzze Marinze, the seeds whereof is to be eaten before they doe ripe: they are cut in pieces, and porridge made of them, not much unlike in fashion to the Melon. There is also another kind of Cucumber of a huge compasse, almost as big as a bushell: the Powders and harbours folke in Italy, use to carry great pieces of them to the field with them to quench their thirst. You must set all these kinds in March, the sides must bee set thinne, two fote one from another, in watrie ground well douned and digged, especially sandy ground: you must lay them in Milke, or water and Honey, thiz dayes; and after dye them and sow them, so shall you have them very pleasant. They will

Cucumbers.

Gourd.

have a very sweete savor, if their seedes be kept many dayes among Roseleaves. Your Cucumbers shall be long & tender, if you set under them water in a broad vessell, two handfulls under them. They delight in water so much as if they be cut off, they wil yet bens toward it, & if they hang or have any stay, they will grow crooked, as also if you set oyle by them, which they greatly abhorre. The flowers being suffered to grow in pipes, do grow a wonderfull length. They love not the winter no more then both the Gourd, whereunto they are almost like in nature: for the flowers, the leaves, and the claspers, are like of them both: but the Gourd is more busie in climbing, so that with hasty growth, it spreadeth quickly over the hearbes and Summer-houses, running up by the walls, and mounting up to the very Tiles of the houses, having a great fruit of a monstrous bignesse: hanging by a small stalke, in fashion like a pearre, and greene in colour, although when it hath flowered, it will grow in what fashion you will have it: they say, there hath beeene some of them nine fote in length. The round ones also grow to be uses for great vessells: the rinde of the new ones, is soft and tender, but of the old ones hard, whereof when the meate is out, travailers make great bottels to carry drinke in. The Gourds that are used to be eaten in summer, are sundry in shape, some are round, some long, some broad: and though the fashion be divers, yet the nature is all one: for it is made by Art to grow in what shape you will, as in the forme of a creeping Dragon, or what you list: they are called in Italian Zumi, in Spanish Calabaz, in Dutch Kuitbisch, in French Vne courge. The seedes that the Gourd beareth next to the stalke (as Palladius saith) are longest, they in the middest round, and those that lie on the side, short, broade, and flat: if you set the sharpe end of the seede downeward, as Columella saith, you shall have them both greater Gourds and Cucumbers. It delighteth in a moyst, rich, well dunged, & well watered ground. That which groweth without water, brings the pleasanter fruit: and that which hath water enough, needes the lese looking too. The flowers where they be set, must be digged a fote & a halfe deepe, the third part whereof must be filled with straw, and then with good rich mould: it must be filled to the middest,

middest; then the seedes being set, must be watered, till they be sprung, and after, earth laid to them full as they grow, till the furrow be filled. They must be set thinnne, two fute asunder, at evenyngh up in sixe or seaben dayes after the setting. Those that are set in drye ground, must be very well watered, therefore they use to set by them earthen pots full of water, with ragges or cleuts in them to water them. When they be a little growen, they must have helpe set by them to climbe upon, the longer they be, the better the meate is. You must beware there come no woman nere where you set them, for their presence doth greatly hurt them. Those that you keepe for shade, you must suffer to remaine upon the stalkes till Winter, and then gather them, and drye them, either in the sunne or in the smoake, for otherwise the stede will rot and perish. They will long be preserved, and continue fresh, if after they be gathered, they be put into a close vessell with the Læs of white wine, or hanged in a vessell of Vinegar, so that they touch not the Wine.

Mer. I will set downe such ordene medicinal now to comynge
and first those I place the **Hartichoch**, or **Aeticochoch***. It is a
hinde of Chistell, by the diligence of the Gardner, brought to be
a good Garden Yeare, and in great estimation at Noblemen
tables; it is as you see, framed with a round prickly head, ha
ving a great sort of Plates set in order stapplewise. The La
tines call it **Scrobilum**, because the fruit of it somethong re
sembleth the Pineapple. The Frenchmen call it **Alicocalum**
of the Arbicke article Al, and **Cocalos** a Pineapple, whereof it
is corruptly called **Artichault**, in Italian and Spanish **Cardo**,
in Dutch sometime by the French name, sometime **Syrobrio**.
It is called of **Columella Cinar**, because in his growing, he
chiefely delighteth in Ashes. The seed is best sownen in March,
and the sets in November: if you will have it yeld fruit
in the Spring, you must besow much ashes upon it: it will
hardly beare the first yere that it is sownen. Beware that you
set not the same with the wrong end upward, for so shall your
Aeticochoch yoke very little and evill favoured: It loveth good
ground and trell dungen, and prospereth best in fat ground.
Paledius would have you moreover, to set the sides in well
ordered beds, in the encrease of the Stone, halfe a foot a
sunder,

sunder, and not deepe, but taking them in thre of your fingers, thrust them downe, till the earth come to the first joynts of your fingers, then cover them tenderly, and water them often, specially toward Summer, so shall you haue the bigger fruit. When they grow up, they must be continually weeded and dunged, as I say, with ashes. They say, they will lose their prickles, if the tops of the seede be made blunt upon a stonye before they be set: and sweet they will be, if the seede be laid in Milkes. You must keepe them from Holes and Hise, with Cats or tame Vessells, as Ruellius teacheth you. Athenaeus calleth the stalke of the Artichochy, ^{mixto}, that lieth upon the ground, and that which standeth upright, ^{erecta}. It may be sowne in February or March the Raine increasing, the seede must not be sowne together, but set one by one as aforesaid, yet if you can procure them, I rather wish you to set them from lippes or young plants then sow them from seede, for they doe so naturally love the earth, that you can hardly lippes so walke a leafe as will not take roote: if you sow them from the seede, you must bee sure to weare them after their first springing, for so the fruit will bee much larger and better.

T H R A. Well, what hearbe is yondor same that commeth up as it were haicles, with a blewish flower and pale, having in the middest of the bellies, as it were, sierie yellow tongues?

M A R I V S. It is saffron, in Greke ^{σαφρον}, in Latine Crocus, in Italian and French, so in Spanish Acrafran.

T H R A. What seede we care any more for ethere Coricum, Sicill, or Cyren, from whence we fetch it with so great charges?

M A R I V S. Yea, there groweth great plentie of it in Germany about Spires, and divers other places, which may compare in godnesse with any other place. It is set in Hatch, of the head that it hath round, and in Cloves as the Lylie, the Rose, and the Spa Dian. Constantine affirmeth, that it may be set of the roote, as soone as the flower is off. The rootes of the heads doe so encrease under the ground, that of one of them some yere springeth eight or nine others. In many places they are removved every seventh or eighth yere, into better ground,

Saffron.

ground, whereby they come againe to be as good as at the first. In the Countries lying about the Rhine, they plucke them up every third yere, and lay them a drying in the sunne till August, and then pulling off the outer skin, they set them againe halfe a foote one from the other: the best heads are those that are fattest, & have little haire, the worst to be rottenly and ill savoured, and have an ill savour: It delighteth to grow by high wayes and nare springs, and to be tread and trampled on, prospering as it were by oppression: It grooth Greene all the winter, it is gathered in Autumne, when it is come to his colure, by plucking out the little yellow tongues from the bell, which are afterwards dried three or four daies together, and well picked and purged, and so made up in Boxes: some thinke it best to dry it in the shadow. It is craftily counterfeited by the Apothecaries, brazing it in red wine, whiche they besmeare, adding thereto the scum of silver or lead to encrease the weight, the craft is perceived by the dustinesse thereof, and by the savor of the red wine. The proesse of the goddie, if it crackle betwene the hands as a bitttle thing, whiche the counterfeit doth not, or if in putting it to your mouth, it cause your eyes to water. Wherefore, the best is that which is new, and hath a pleasant smell, in colour like to Gold, and dieth the fingers in touching it. In March you must purge the ground where it groweth, and whether ye plucke it up or not, notwithstanding, other hearbes may very well grow there untill August: Purslane, Parsley, or such like hearbs doe best grow there. And when the Haffron beginneth to florow, you must rid away the other hearbs: so in Harvest time about September or October it floroweth.

Of the ordering of Rosemary. I will speake alittle. There are which suppose it to be the same which the Grecians call, *Rosmaris*, because it savoureth like Frankencense, in Latine it is called Rosmarinus, and in all other tongaes it keepeth the name, it serveth both for pleasure and profit: Theophrastus maketh two kinnes of it, a berraine, and a fruitfull, and set of small slips in April: it is set set by themselves for their pleasure, to grow in sundry poyntions, as in the fasshion of a Cart, a Peacocke, or such like thing as they fancies. It delighteth in stony or rough ground, and in the tops of the said enclosed in little

little huskes white and round. It flowzeth twise a yere, in the Spring, and in the end of Summer: it is gathered from May till September, and it is good to plucke off the flowre often, that it may not flower too much. In the higher parts of France it groweth wilde in such plentie, that ther use almost no other feewell: It is in cole Countries in Winter set in Cellars and hot houses, and is brought againe in the Spring into the Garden. But here you must beware, that when you first bring it out, you keepe it from the March Sunne, setting it in the shad-dow, acquainting it by little and little with the ayre: some use to house it with Straw and Horse dung, and so leabe it in the Garden. Sage, in Latine Salvia, and like in other Languages, is an Heache common in every Garden: it is planted both of the seede, and of the slip, in March, in any kinde of ground, it maketh no matter where: the gardeners use to lay bucking ashes about it, whereby it prospereth the better. Next to Sage, is Mint, in Latine Menta, in Dutch Myntz, in Italian and French, after the Latine, in Spanish Yerva buena: it is planted and sowed in all things as Sage is: it prospereth both in dry and wet grounds, and groweth well by waters. If you lacke seedes, you may take the seede of the wilde Mint, and set them with the tops downward, whereby they shall leabe their ranknesse: and being once sowne or set, groweth every yere.

Mints.

Pimpernel.

Hysop.

Savorie.

Bafyll.

Pimpernell, in Latine Pimpinella, is used both in the Kitchin, and in Phisiche: and being once sowne, groweth every yere, both in sunne places and in shadowy: it groweth in most places wilde. Hysope in Latine Hisopus, and so called in most Tongues in Europe: a common heache, knowne to every Gardener: it desirish though no sunne ground, yet good and rich ground, it is planted both of the seed, and of the slippe: when it hath once taken root, it careth not for the sharpnesse of winter: Savorie, in Latine Satureia, or, as Colomella saith, Cuoila, in Italian Coniella, Savoreggia, Thymbre, in French, Savoie, in Dutch Kinelzwibelisop, groweth in baccains places, and is set and sowed as the plants before. The next is that which commonly is called Bafyll, in Latine Ocimum, in French, Italian, and Dutch, Basilica: an herbe that is used to be set in the mire of knots, and in windowes, for the excellent sauour that it

It hath: it is also good for the pot: it is sowed in March and Aprill, and delighteth in sunny ground, you must put two siedes ^{Marienem} will together. Basill is best watered at noone, whereas all other hearbs are to be watered in the morning and in the evening, it may be removed in May. Theophractus saith, that it prospereth best, when it is sowed with cresses. Marjerum, in Latine Amaranthus, and Maiorana, is also in like sort used: the Dutch and ^{Marienem} the Italiens call it after the Latine, the Spaniards Amoredox, the French, Mariolaine and Thyo, in Crake of Dioscorides and Paulus Agineta ^{ouvroir}: this also for the pleasant sa- bouri it hath is set in pots and in Gardens: it is sowed in March thée or four siedes together, and halfe a scote a sunder, in May when it groweth to some height as Basyll, it is remoaved. Time, neare of kindred to these, in French, Italian, and Dutch ^{Time}, like the Latine, in Spanish Tomillo, delighteth in stony, light, and sunnie ground: it springeth of the siedes and of the slippe, and also of the flowre, as Theophractus saith. These three ten- der and delicate Hearbes are to be sowed with great heed, ei- ther in earthen pots, or in Garden beds. Hitherto have I de- scribed unto you such Hearbs as serve for the Bitchin: and be- cause the later sort are also esteemed for the labours, I will goe forward with the description of the rest that are set in Gar- dens for the pleasure of them, and for the labour doe garnish the said Gardens, and serve also for other purposes. Of Rose- marie I speake before, I will now procede with these that grow besore my feet. Lavender called in Latine Lavanda, or ^{Lavender.} Lavendula, that groweth in borders about the beds, and keepeth the Latine name in other tongues, doth grow in wilde places and stony: it is set of the slips, and remooved: it groweth to Spyke in June, and in July is gathered & tyed in bundles for the sauvre: it is distilled for sweet waters. Flowre-gentle, in Latine Flow- Amanthus, though it have no labour at all: yet hath it a de- gentle, lightfull beautie to the eye: the Frenchmen, for the faicenesse of the colours, excelling both Crimson and Purple in graine, doe call it Passiflours, the Italiens Fiorveluto, because it con- tenteth in colour with Crimson in graine: it loveth to be often gathered and plucked, whereby it springeth the better: the Colours after they be dead, with a little water conte- agains

againe to their colour: it is called Amaranthus, because it dyeth not.

Lavender-cotten: some call it Santonia, and female Soutthern-wood, in Dutch it is called Cypressen, in French Cypræ: it groweth commonly in Gardens, springing every yere. Myrtell, in Latine Myrtus, in Italian Myrto, in Spanish Arabian, in French Meurte, in Dutch Welscheidelber, the leades are not much unlike the leaves of the Olive tree, something smaller, with slender branches and leaves growing in order one by another, as you see, with blacke berries, and leaved like the Pomegranate. It groweth alwayes gréene: it is set and sowed both of the sedē and slippe, and the stocke: but you must still raise up the earth about it: till it be thoroughly rooted. Some sow the berries being a little beaten, and covered in furrows of earth: it delighteth in continuall weeding: so groweth it to a handsome height, meete to shadow Herbs: it loveth to bee watered with the Wine of men, or of sheeps. This only is to be wondred at, that of the liquor therof alone, may be made all sortes of Wine and Dyle: Cato teacheth to make Wine of the berries, being dyed, and put in water and hony sodden together: if they be not dyed, they come to Dyle: how the wine of them is made, Dioscorides sufficiently declarereth: Plinic reporteth that Cato made three sortes of Wyxtels, white, blacke, and a third kind, that he calleth Conjugale: it delighteth to grow by the sea bankes, as Servius saith, it groweth at this day commonly in Italy, along by the sea coasts.

I may not in this place forget Anise, whose seed is so pretious and medicinable, it is hot and dry, it dissolueth humors and obstrutions, and is very comfortable for weake stomacks, it delighteth in good and loose mould, and is to be sowne in the height of the Spring only.

Next this I place Organie, which is also hot and dry, and excellent against any sicknesse of the Liver; the ground in which it most joyeth, would be a little ironie and full of Rubbish, yet by no means undunged: the Moneth fittest for the sowing of it is March and September, the moneth being in Libra or any other moist signe; it must be continually watered till it appeare above the earth but after four boynes, for being once well fixed it is ever certaine.

Whits

White Poppy is Colde, and moist, and much provoketh
Slaþe, it would be solvne in a rich warme ground in the mon-
thes of March, September and November; Germaner is hot & dry and excellent against the Kings-ebill,
Obstrucionis of the Spyne, and hardnesse of vrine. It is an
harte hearbe and will prosper in any ground, it is to be solvne
either in the Spiring or fall of the leafe, but if you set the slippe
it flourisheth the better, and it is most comely for the setting
forth of knots in Gardens.

Valerian is hot and dry, and preventeth infection, it helpeth
Aches and other griefes proceeding from windy causes, it lo-
beth to grow in moist and low places, the ground being well
manured, and till it be shott at least an handfull high, it must
be kept with continual watring; The moistest time in the
yere is the best to sow it in.

Pepperwort is hot and dry, yet of the two much more hot, it
is good against all kinde of Aches and other paine in the
joints, or sinewes; It delighteth in a rich blacke Doyle, sat and
loose, it would be solvne in Februarie, and removed in Septem-
ber.

Philipendula is very hot and dry, and is good against abor-
tive Witches, Stone, Strangury, or any greefe proceeding from
cold causes; it may be solvne in any barcen, stony or gravelly
soyle, in the monethes of May, April or September; it
neither desircth much weeding nor much watring, but
being once committed to the ground appeareth sodainly.

Lastly, and which is not inferiour, but rather superiour to any
before going. I place the blessed Thistle, which the Italians
call Cardus-Benedictus, it is hot and dry and very sovereigne a-
gainst most inward sicknesse, especiall fevers and infections; it
launcheth bloud, and is a great comforter of the blythe, it de-
lighteth in a rich-ground and a loose well tempered meuld, it
must be solvne very hallow and not covered aboue two inches
deep; the first quarter of the moneth is the best time to sow it
in, and in the moneths of March, May or September; if you
sow alittle fine flaxen Wheat with it, most assuredly it will
prosper much better.

"T H R P. Oh what sweete and godly Gellowers are here! Gellowers,
you

You may truly say, that Salomon in all his princely pomps, was never able to attaine to this beauty: some of them glister with a perfect Crimson dye, some with a deepe Purple, and some with a passing beautifull Carnation: I warbare the old writers knew nothing of these in their time.

M A R I V S . There are some that suppose it to be a kind of Garden Betonie, which the Gardener leaching out of the field, and thynning Clodes into the rootes of them, with diligent planting, have brought to this excellency: others think it to be called Veronica of the Spaniards, who first found it. Some thinke it to be Ocanche, because it floroweth with the Wine: it delighteth in warme sunnis ground: it is solwed seldome of late, but commonly set of the stippes, as I said of Rosemary. The Gardners in the end of Summer, do take the rootes and set them in Pans, Pots, or Pailes, and when the frostes come, they carry them into their Cellars, and in fayre warme dayes bring them abroad againe, and suffer them to be now or then watered with the raine. It hath bene often seen, that in such banis or cellars they habe blowed all the winter long, through warmenesse of the place: some set boughs about them, and cover them with straw and Horse-dung, to preserve them against the cold: it often happeneth that one roote beareth one pale white flower and red, and the other speckled or Carnation.

Thus much for the opinions of the Ancients; but because the English are at this day the onely excellent Masters of this most excellent flower, I will therefore rely enely upon their opinions: and they affirme that Gillifloweres are of divers kindes; some single as Pinkes, Wall-gillifloweres, and all sorts of Gillifloweres that are soone from the seede; some double as the Carnation, the Damask, the Clove-gilliflower, the Dover, the Granado, the Queens-gilliflower, the Bandoleir, the Christalline, and a world of others, which are of all other flowers most sweete and delicate. All but the Wall-gilliflower lobe good fertile earths, and may be sowne either in March, July, or August, they are better to be planted of stippes than sowne, yet both will prosper. They are very tender, and the roote so pleasant that the wormes will destroy them, and whence it comes, that they plant them in earthen pots and halfe tubbs, which at

your pleasure you may remove from the sunne to the shadē, and from the roughnesse of Stoynes to places of shelter : they grow up high on long slender stalkes, which you must defend and support with quare cradles made of splinted wood, brast the wiade and the waight of th̄ flowers b̄ake them. The white Gilliflowres you may make of any collaut you please, as if you would have them of a purple colour, then lay the stibes in steep in the lies of red wine, and after their sowing, water them with the same less; if you will have them of a scarlet red, you shall put Vermilion betwene the rindes and the small heads growing about the roote; if you would have them blwo, you shall dissolve Ayre or Bisse betwene the rindes and the head; if yellow, then dissolve Dympt, if greene, dissolve Verdi-greate; and thus of other colours. Now if it please you to have them of mixt colours, you may also by grafting of contrary colours one into another, attaine your desire, and you may both as great ease graft the Gillidowre as any flower what-soever, by ioyning the knots one into another or twisting the rootes one into another, and then wrapping them about with a little soft, cleaved silke of the same colour you would have the Gilliflowre, and covering the place close with a little soft red waxe well tempered; and you shall understand that the grafting of Gilliflowres, maketh them exceeding great, double and most orient of colour. Now if you will have your Gilliflowers of dyvers odiferous smells, you may doe it in this manner, take two or th̄e great Cloves and steep them souce and twentie houres in damaskē wō's water, then take them out and bruse them, and putt them into a fine cambricke cage, and so bind them about the roote of the Gilliflowre here to the setting on of the stalke, and so plant it in a fine soft and fertill mould, and water it with the rose water wherein the Cloves were steeped, and the flower which springeth from the same will have so delicate a mixt smell of the clove and the Rosewater, that it will ynde both delight and wonder, If in the same manner you take a sticke of Cinnamon and steep it in Rosewater, and then bruse it and bind it as aforesaid, all the flowers will smell strangely of Cinnamon. If you take two or th̄e graines of spuske, and mixt it with th̄at or fourte

droppes of Damask rose water, and binde it as aforesaid: the flowers will smell strongly of Rose, yet not too hot or visenste by reason of the correction of the Rose water; and in this sort you may doe with Ambergreese, with Benjamine, with storax or any other sweete drugges whatsoeuer. And if in any of these confections before named, you keepe the seedes of your Gilliflowers, fourte and twentie howres before you sow them, they will take the same smelts in which you keepe them, onely they will not be so large or double as those which are replanted or grafted.

Of the Wallgilliflower.

Now for your Wallgilliflower, it delighteth in hardy ground, lime and stony ground, whence it cometh that they covet most to grow upon walles, Pavements and such like battaine places; it may be sowne in any moneth or season, for it is a seede of that hardynesse, that it makes no difference betwixt Summer and Winter, but will flourish in both equally and beareth his flowres all the yere, whence it comes that the husbandman preserves it most in his Bee-garden, for it is wonderous sweete and affordeth much honie: It would be sowne in verie small quantitie, for after it have once taken roote, it will naturally of it selfe overspred much ground, and hardly ever after be rooted out: it is of it selfe of so exceeding a strong smell and savor, that it cannot be forced to take any other, and therefore is ever preserved in its owne nature.

To preserve
Gilliflow-
ers.

For the preservation and increase of all other Gilliflowers (before spoken of) which are of a tender and cullous nature, and because the seede at no time bringeth forth more than a single Pinke, therefore it is good that you observe both in the Spring, and at the fall of the leafe, or at any other time when the flower is recheare in its braunches, to plucke many as conveniently you can without hurt, and plant them in a bed digged for the purpose in some hable place where the sunne commeth as little as may be, and plant them as thicke and close together as may be, for they will prester one another. Whiche which you so planted in the fall of the leafe you may remoue at the spring and plant them

Hem in your knotes, Borders or any other other perspicuous place, and those you planted in the spring you may remoue at the fall, and if any of your elder rotes drye or decay as the Sunne is wonderous perillous unto them, then you may at any time from this strok of young Impes supplie the place, and keepe your Garden ever florishing.

The Helitropion or flowers of the Sunne is in nature and colour like other English Marigolds, wher it exceedeth huge in compasse, so many of them will be twentie and fourte and twentie inches in compasse, according to the fertillnesse of the Soyle in which they grow, and the oft re-planting of their rotes, they are exceeding godly to luke on, and pleasant to smell; they open their floweres at the rising of the Sunne, and close them againe at the Sunne setting: it delighteth in any soyle that is fertile either by arte or nature, and may be sowne in any Moneth from Februarie till September.

The oft planting and replanting of the root after it is sprung a handfull from the roote, maketh it grow to the uttermost bignesse: it would have the Gall and Meast open upon it, onely some small penthouse to keepe the sharpnesse of the winde from it *.

T H R A. Loe, yonder are Roses growing in Borders, and made in a maze: doe they grow of the siede, or of the set?

M A R I V S. Roses, called in Latine Rosa; and in all other languages as in Latine, are diversly planted, sometime of the rotes, sometime of the branches, being cut in small sets, and planted a foote asunder. Some wreath them in Garlands, and so set them to have them smell the pleasanter. The use of sowing of them is best: howbeit, they will very well grow of the siede, though it be long ere they spring, and therfore they set them of sets a foote in length; it neither delighteth in rich or moist ground, but is well contented to grow amongst rubbish, and under walles. The places where they must grow must be digged deeper than Corne ground, and not so deepe as the Vineyard: the Rose is rather a Thorne then a plant,

And groweth upon the very brambles : it commeth first out in little bushes and long sharpe beard, which after they be opened, it discloseth it selfe and sproadeth abroad, with a yellow hearey tuske in the midst. Pliny maketh mention of sundry sorts of them : one sort he calleth Milesia, having an Orient and fiery colour, another Alabandica, with white leaves, and Spermonia, the basell sort of all : the Damaske and the White, are used for sweet waters : they differ in roughnes, prickles, colour and smell. There are that have but only five leaves, & others with an hundred leaves, neither good in beauty no: in smell: the roughnes of the rinde (as Pliny sayth) is a signe of the savour. There are some little pale ones, called Carnation and Rosavincars, these do wonderfully grow where they once are planted, and have a most excellent savour. Roses are used to be set in February, which is either done with the seed, or the set planted in little furrowes. The saedes (as Palladius sayth) are not the little yellow things in the midst of the Rose, but the graines that growes within the red riped Berry : the ripenes whereof is deemed by the swarthenesse and the softnesse of the berry: where they once are planted, they continue long, and after they dy, they send out new buds and springs. If you lacke sets, and would of a fewe have a great number, take the banches that begin as it were, to shew their buds, and cutting them in sundry sets, some of five fingers in length, set them in good ground well dunged and watered : and when they be of a yeres growth, take them up, and set them a foute asunder, praine them and trimme them with often digging about them. Roses must still be cut, so: the more you cut them, the thicker and the doublet they grow, otherwise they will ware single and wilde, it will also doe them god sometime to burne them : being removed, it springeth very soone and well, being set of sets souce fingers long and more, after the setting of the leauen starres, and after remov'd in a welkerly wunde, & set a foute asunder, and often digged. The old Rosyars must have the earth losed about them in February, and the dead twigges cut off, and where they ware thinne, they must be repayred with the young springes. To have Roses of fine sundry colours upon one rote, make when :

When they begin to burgen, a fine hole beneath in the stocke under the ioynt, and fill it with red colour made of Wrafell sod in waker, and thrust it in with a cloath, and in the like sort put into another part of the stocke grēne colour, & in another yellow, and what other colours you will, and cover the holes well with Ore dung and Lome, or very god earth. If you will have your Roses heare betimes, make a little trench of two hand-breadths round about it, and poure in hot water twice a day, and thus doing, (as Democritus promiseth) you shall have Roses in January. You may preserue Roses before they open, if making a slit in a Rēde, you enclose the blossome, & when you would have fresh Roses, take them out of the Rēdes: others put them in Earthen Pots close covered, and set them ab;oad: the Roses continue alwayes fresh that are dipt in the Dregges of Oyle. If you will have them at all times, you must set them every moneth, and dung them, and so (as Didymus sayth) you shall have them continually. To cause them, or any other flowres to grow double, put two or thair of the sides in a Wheat straw, & so lay them in the ground. If you set Garlick by your Roses, they will be the sweeter: the drier the ground is where they groin, the sweeter they will be, as it appeareth by the season of the yere, for some yeres they are sweeter then others: the Rose will be white, that is smaked with Brimstone, when it beginneth to open: amongst all Roses, those are most to be commended, that they call Carnations and Provincials. The Oyle of Roses was greatly had in estimation even in Homer his time, and at this day the Vinegar of Roses is greatly used. Next unto the Rose in worthinesse, for his sa-vour and beautysfull whitenesse is the Lilly. The Crēkes Lillies hold opinion: that it sprang first of Junos Milke sprinckled up on the ground. In February we begin to set Lillies, or if they grew before, to loose the earth about them with a rake, taking god hāde that the young tender shoothes about the roote be not hurt, no; the little head which taken from the old roote, be set for new Lillies. As the Roses are, so are the Lillies, the sweeter, the drier the ground is where they groin: Lillies and Roses being once set, continue both very long.

There are red Lillies made so by Art, for they take the stalkes and rotes of the Lillie, and hang them in the smoake till they wither, and when the knots begin to uncover, they are layd in March in the Lees of red wine, till they be covered, and then set in the ground, with the Lees poured about them, so will they come to be purple; and indeede as you alter the colour of the Gilliflower, so you may change the complexion of any Lily.

Violens.

There are sundry sortes of Violets, both of kinde and colour, but the ordering of them is in a manner all one.

Bearfoote
or Setter-
worts.

Next I place Bearfoote or Setterwort, and thers are two kindes of it, the blacke and the white. The rote of the Bearfoote they thrust through the eare, or into the breake of the beast, that is either diseased in his lungs, or hath the Purcen. Columella seemeth to call it Consigillo: it groweth not in Gardens, except it be sowne, it continueth long, and loveth cold and woody ground. There standes, not farre from that, another very noble hearbe in Phisicke called Angelica. His rote, because it is a soueraigne remeedy against the plague, and hath divers other god operations, it is cherished in our Gardens, and being once sowne, it commeth up every yare: it groweth also wilde in the mountaine Countrey, and flowreth in July and August.

Angelica.

Here is also Helicampana, this also is set in our Gardens for medicines sake, and we make much of it for the rote, it groweth wilde in the hilly Countries, and by shadowy places. In Sommer the rote is taken out of the ground, and cut in small pieces, and so dyed: at this day it is called Enula campana: it hath a yellow flower, a lease like Mallin, but white and hoarie at the one side.

Helicam-
pana.

Wormewood, though it grow in every place, yet this that you see here is Romane or Pontick Wormewood; this kinde is set in our Gardens, and thought to be the best. Savine which we have here also in our Gardens, for divers diseases of Cattell, hath leaves like Juniper or Cypres, alwayes grane, there are two kindes of it, one like the Tamariske, the other like Cypres: it is a bush rather spreading in breadth, then growing in heighth: the Berries which he beareth, may be gathered in the end of Sommer, or at any other time.

Worme-
wood.

Savine.

Here

Here is also Valerian which is hot and dry, and preventeth infection, it helpeth stiches and other greeves proceeding from wittie causes, it longeth to grow in moist and low places, (the ground being well manured,) and till it be shot at least an handfull high, it must be kept with continuall watering; the moistest time in the yere is the best to sow it in.

This quarter I kepe sov; outlandish floweres, which although they are moze for beauty and glorie then use or smell, yet are they such an ornament to the garden, and so pleasing to the eye besides the raritie and strangenesse, that the Garden is held imperfect which is deprived of them, the number of them is like their colours hardly to be numbered, therfore I will trouble your eares but with the rehearsall of some few of the most principall which I account the Crowne-emperiall, the worthiest of all floweres both for raine and homebred, it is the delicatest and strangest; It hath the shafe of an emperiall Crowne and will be of divers colours according to the art of the Gardner, in the middle of the flower you shall see a round pearle stand, in proportion, colour and Daintiness like a blew naturall peach, onely it is of a soft liquid substance. This pearle if you shake the flower never so violently will not fall off, neither if you let it continue never so long, will it eyther increase or diminish in the bignesse, but remaineth all one, yet if with your finger, you take and wipe it away, in lesse then an houre after you shall have another arise in the same place and of the same bignesse; this pearle if you tast it upon your tongue, is pleasant & sweet like honie, This flower when the Sunne ariseth you shall see it looke directly to the East, with the stalke bending downe thereunto, and as the Sunne ariseth higher and higher, so the flower will likewise arise, and when the Sunne is come into the Superiorian or Scorne point, which is directly over it, then will it stand upright upon the stalke and looke directly upward, and as the Sunne declineth so will it likewise decline, and at the Sun setting looke directly to the West onely, The sides of this flower are very tender, and therfore would be carefullly sowne in a very rich and fertill Earth, well broken and manured, The seasons most mate for the same is the latter end of March, Aprill, or May, for the floweres florish most in May, June and

July. As soon as it is sprung an handfull above the earth, you shall remoue it into a screech mould, and that will make it flourish the braver: The roote of this flower is like an Apple, or great flat Onyon, and therfore in the replanting of it you must be carefull to make an hole large and fit for the same, and to fire the mould gently and close about the same: In the winter it shinketh into the earth, and is not at all to bee discerned, by meanes whereof I have seen divers (supposing it to be dead) to digge up the earth, and negligently spoyle the roote; but bee not you of that opinion, and in the Spring you shall see it arise and flourish bravely.

The Du-
lippo.

Next to this I place the Dulippo or Tulippo, which is but a little shott of the Crowne-Emperiall in pleasantnesse, beauty, and rarenesse, for you may have them of all colours whatsoeuer, in such sort as was shewed you for the Gillyflowers, Lillies, and other roses; they are tender at the first, springing from the seide, and therfore must be sowne in a fine rich mould in the warmth of the Sunne, either in March, April, or May; but after they are once sprung aboves the ground, they are reasonable hard, and will defend themselves against most weathers. The roote of this flower is shaped like a Pear, with the biggest end downward, and many small thynks at the bottomme, therefore you must be sure when you remoue or replant it, to cover all the roote in fresh mould, and let not any part of the white thereof be uncovered. This flower by honest replanting, you may have to flourish in all the Spring and Summer Monthes in the place; for in the dead of winter it shinketh into the ground, and is not at all to be perceived. The stalkes of these flowers are twable, therfore to support and defend them from the shakings of the winds, you must make little cradles of small sticks in such wise as you did for the Gillyflowers.

The Nar-
cissus.

The Narcissus is a very curious & dainty flower, and through his much variety & alteration in growing, they are supposed to be of divers kinds, but it is not so, for in as much as they are seen to be of divers colours, that is but the Art of the Gardener, as is before express in other flowers; & whereas some grow single, some double, & some double upon double, you shal understand that such as grow single, grow simply from the seide only those which

which are double & no more, are such as have bene planted and replanted, the small thidcs of the rotes being clipt away, & nothing being left about it that is superfluous ; & those which are double upon double, are the double plants grafted one into another. This flower loveth a rich warme soyle, the mould being easie and light : It may be sowne in any Month of the Spring, & will flourish all the Summer after : Before it appeare above ground, it would be oft watered, but after it shills not howlittle, for it will defend it selfe sufficiently. Not unlike unto this are your Daffadills of all kinds and colours, & in the same earths & seasons delighteth either to be sowne or planted, & will in the same manner double and redouble his leaves. Many other foraigne & strange flowers there are, but the order of their planting differeth nothing from these which I have already declared, being the most tender and curios of all other; onely I wil advise every skillfull Gardner, that when he shall receive any seed from any foraigne Nation, to leavne as neare as he can the nature of the soyle from whence it commeth, as hot, moy & cold, o; dry; and then comparing it with his owne, sowe it as neare as he can in the earth & in the seasons that are nearest to the soyle from whence it came: as thus for example. If it came from a clyme much hotter than his owne, then to sow it in a sandy mould or other mould made warme by the strenght of manure, in the warmest time of the day, & in those Months of the Spring which are warmest, as Aprill or May : you shall let it have the Sunne freely all the day, & at night with maties, penthouse, or other defence, shield it from sharpe winds, scots, and cold dewes.

I have scene diverse Noblemen, & Gentlemen (which have bene very curios in these dainty flowers) that have made large frames of wood, with boards of twenty inches depe, standing upon little round wheoles of wood, which being made long, square, or round, according to the Masters fancy: they have filled with choice earth, such as is most proper to the flower they would have grow, and then in them sowe their seeds or set their plants, in such sort as hath beeene before described, and so placing them in such open places of the Gorden, where they may have the strenght and violence of the Sunne.

An excel-
lent advise.

A new
manner of
planting
and trans-
porting
flowers and
fruits.

Sunne all the day, and the comfort of such moderate shoures as fall without violence or extraordynary beating, and at night draw them into some low vaulted Gallerie ioyning upon the Garden, where they may stand warme and safe from stormes, windes, frosts, dewes, blastings, and other mischeives which euer happen in the Sunnes absence. And in this manner you may not onely have all sortes of daintie foxaine flowres, but also all sortes of the most delicatest frutes that may be, as the Orange, Lemon, Pomegranate, Citheran, Cinamon, Almond, Olyne, or any other from what clime soever it be derived, obseruing onely but to make your frames of woode (which containes your earth) deeper and larger, according to the fruite you plant in it, and that your Alleyes through which you draw your Trees when you house them, be smooth and levell, least being rough and uneven, you sogge and shake the rootes with the waight of the trees which is dangerous.

Also in these frames of woode I have knowne whole Gardens of frutes and flowres conveyed beyond the Seas, as from England into Denmarke, from Italy and Fraunce into England, and so to other Nations.

Now for such flowres or frutes as shall be brought from a colder or more barrains ground then your one, there needeth not much curiositie in the planting of them, because a better ever bringeth fourth a better increase; onely I would wish you to obserue to give all such frutes and flower the uttermost libertie of the weather, and rather to abde colenesse, by shaddoys, then increase any warmth by refleaction, as also to augment Shoures by artificiall watirings, rather then to let the roote dry for want of continuall moisture*.

T H A R. But many times we see Gardens be destroyed with wormes and vermine, what remedy have you for this?

M A R I V S. Of the faults of the ground, and the remedy thereof, as the amending of either too much moisture or drynesse: I speake in the beginning, touching wormes, Flies, and other vermine that annoy the Gardens, which for the most part are these. Caterpillars, Snailles, Moles, Mice, Gnats, and Antes. There are that say, that if you mingle with your

sedes

fides soot, or the Juice of Youselake, or Singrean, the
 Caterpillers will not meddle with the herbe that springeth of
 such fæde: and that they will doe no harme to your Trees, if
 you spinkle them with the water wherein the ashes of Wines
 hath bene laid: moxever the stalkes of Garliche made in
 bundles, and burnt in Orchards or Gardens, destroyeth the
 Caterpillers. They will not breed (as they say) if you burne
 about the rootes of your herbs or Trees, quicke brimstone and
 lime : the same they report of Lie made of the Fiftree. Ants
 will not annoy your coone or hearbs, if you encompasse it round
 with Chalke, or put into their hills the ashes of burnt Snailles,
 and if some of them be taken & burnt, the rest will not come
 neare the labour: if Ash foecida be laid in Dyle, and pouzed
 upon their hills, it utterly destroyeth them; they will not touch
 the trees nor the hearbs, if you annoynt the stalkes with bitter
 Lupines, or lime laid with oyle. You must shake off the Ca-
 terpillers in the morning, or late in the evening whe: they be
 numbed: also water wherein Dill hath bene sodden, cast a-
 bout the Orchard when it is colde, destroyeth them It is wri-
 ten, that if you set Thiches about your Garden, Caterpillers
 willl not b̄eed, and if they be already b̄ed, you must saeth the
 juice of Wormewod, and cast among them. The dung of Bul-
 lockes burnt upon the coales, destroyeth Gnats: the like also
 doth brimstone: a sponge wet with vinegar and hanged up,
 draweth also swarmes of Gnats unto it: also the maw of a
 sheepe new killed, not washed nor made cleane, if it be laid in
 the place where Moths, or other such vermine doe use, and cov-
 ered a little the upper part, you shall after two daye finde all
 the noysome vermine crept into it: thus must you doe twise or
 thrise, till you thinke you have destroyed them all. Of kil-
 ling and driving away Poles, Sotion the Graeks writeth,
 that you must take a Nut, or any like fruit, & making it hollow
 within, fill it up with Chaffe, Rozen, and Brimstone: after-
 ward stoppe the bent holes that the Mole hath in every place,
 that the smoake b̄eake not out, onely leaving one open, whens
 you shall lay the Nut, in such soot as it may receive the wind
 on the backe part, that may drive the smoake into the Wines;
 there are also traps to be made, for the destroying of Poles: a
Against Caterpillars.
Moles.
 frame

frame is to be set upon the new Hills, with a piece of wood so hollow and framed, that it may receive (as it were in a sheath) another piece of wood made in fashyon like a Unise, to this is ioyned another little sticke that lieth in the hole, and is fastned to a Catch without, that as sone as the Hole toucheth the sticke within, shā is taken presently, as it were, with a payre of Sheares. Mise are taken, if ye poure into a platter, the thickest mother of Dyle, and set in the house a night, as many as come at it are taken: also the roote of Bearefoot mingled with Chēse, Bread, flowre, or grease, killeth them. Tarte and very sharpe Vinegar mingled with the juice of Henbane, and sprinkled upon the Hearbs, killeth the Fleas, or little blacke wormes that be in them. No kinde of vermine will annoy your Hearbes, if you take a good sort of Crefishes, and cast them in an earthen vessel with water, suffering them to worke abroad in the Sunne for the space of ten dayes, and after with their liquor sprinkle your Hearbes. Next these or rather greater then any before going, is the offence of Thunder and lighting which in a moment killeth all sorts of flowers, plants, and Treas even in the height of their pride and florishing, which to prevent it hath bēne the practise of all the ancient Gardiners to plant against the wals of their Gardens, or in the midle of their Quarters where their choyses flowers grow, the Laurell or Baytre which is ever held a defence against those trikitings.

Next I place Toades and Froggs, which are exceeding venomous and great destroyers of young plants, chielie in their first appearing above the ground; and the ancient Gardeners have used to destroy them by burning the fat of a Stagge in some part of the Garden Beds, from which Earth all creatures that have poison in them will slay with all violence; other Gardeners will watch where the Byte pearcheth on nights, and gathering up her dung scatter it upon the bedds eyther simple, or mixt with the shavings of an old Harts horne, and no venemous thing will come nere it.

The greene Flye of all flies is held the worst, and is most greedie to hurt Herbes and plants, wherefore to destroy him take Henbane leaves, Houselecke and Mintes, and beat them in a Morter

Mise,

Garden
Flies.

Thunder
and light-
ning.

Toads and
frogs.

The greene
flye.

Woster, shen straine forth the juice and adde thereto as much
Winegar as was of all the rest, and therewith sprinkle your
Beds all over, and the Crane fly will never come nere them.
Some hold opinion, that if you plant the hearbe Aret in your
Garden, that it is a fasse preserbativ against these greene flies;
soz it is most certaine that the very smell thereof will kill these
and most sortes of all other flies whatsoever, as hath bene
found by approved experiance and the sytes of old ancient Ably
Gardens, which a man shall selome finde without this hearbe
planted in them.

Moathes or Moaights are very pernicious in a Garden, soz Moathes,
they destroy both bedes and plants, and there is no better or
more certaine way to kill them, then by taking ould horse
hoofes and burning them, with the smoake thereof to perfume all
the places, where they abide, q it will in an instant kill them.

Cankers are a kind of filthie wormes which devoueth both Cankers.
the great and small leaves of all sortes of sweete plants, especi-
ally Lettuce, Cabadge, Coleslowers and such like, and the
way to destroy them is to scatter amongst your plants Cowe-
dung, or to spinkle the juice thereof with a wiffe of Rue over
all the beddes: and though some with a cuttie knife, use to scrap
them from the leaves, and so kill them on a tileheare, yet soz
my part I hold this the nearer way, and both more certaine and
more easie. Thus I have shewed you the perfection of my
Garden which was perfected with much labour, long experiance of
time and not a little cost, I will now deliuer you a little trach
on Method howz to entertainement of any great person in
any parke or other place of pleasure, to make a compleat Gar-
den in two or three dayes.

THA.R. God wir prociede.

MARIUS. If you shall entertaine any noble personage to
whom you would give the delight of al strange contentment ei-
ther in parke or other remoteplace of pleasure, mere unto Ponds-
river or other waters of clearenes, after you have made Arbours
& Summer Bowers to feast in, the fashion whereof is so common
that every laborer can make them, you shal then make out your
Garden plot, beslowing such sleight fence thereon as you shall
think fit; then cast forth your Alleys and devide them from the
Quarters by pacing away the grane swarth with a paring
spade

spade finely and even by a directe line, then having stote of labourers, cast up the quarters, then breaking the mould and levelling it you shall make sad the Earth againe, then upon your Quarters you shall draw forth either knots, armes, or any other devise which shall be best pleasing to your fancies, asey, ther knots with single or double Traylls or any other emblematical devise, as Birds, Beasts and such like; and having trenched those devises prettie deep, then instead of hearbes to set in them, take greene sods of cleane wort grasse, and cutting it proportionably to the knot, lay them into the trench and joyning sod to sod close and artificially, you shall set forth your whole knot or the portrature of your armes or other devise; and then taking a cleane brume that hath not so merrily bene sweeped withall, you shall brume all uncleanesse from the Grasse, and then you shall behold your knots as compleat and as comely as if it had bene set with hearbes many yeres before. Now for the portrature of any living thing, you shall cut it forth joyning sod unto sod, & then afterward place it in the earthinow if in this plot of ground (which you make your Garden) there be eyther naturall or artificiall Points or Bankes, then upon them you may in the selfesame sort with greene sods set sooth a slight eyshet at the field or River, or the maner of hunting any chasse, or any historie of other devise that you please, onely in working against Points and bankes you must observe to have many small pinnes to stay your worke and keape your sods from slipping one from the other till such time as you have made every thing fast with earth, which you must ramme very close and hard. As for floweres or such like adougments, you may (if the time of the yere serue) the morning before removē them, with their earth, from some other Garden, and plant them at your pleasure, or otherwise you may adorne it with artificiall floweres made of houre and such like stoffe and usuall to be bought in many places, as also artificiall frutes made of Bladders, paper or pastes and coloured unto the life. Now if you will adorne this Garden with divers colours eyther to distinguishe armes, knots, or the earth it selfe, you shall thus make your colours, first for yellow it is eyther made of yellow clay (usuall almost to be had almost in every place, or the yellow

Iowest Hand, or for want of both of your Flanders stile which is to be bought of every Ironmunger, or Chauldler, and any of these you must beat to dust; white you shall make of fine Chalke beaten to dust, or of well burnt Plaster, or for necessarie of the whitest Lime, but that will soone decay; Blacke is made of your best and purest charcole dust well cleasned and sifted. Red is made of broken uselesse well burnt Wickes beaten to dust, and well cleasned from spots; bliew is to be made of white Chaulke and blacke cold dust mired together, till the Blacke hath brought the white to a perfect Blewneesse. Lastly Craine; both for the naturall propertie belonging to the Garden, as also for better continuance and longlasting, you shall make of greene Hoods, or Camomile well planted where any such colour is to be used: as for the rest of the colours you shall sift them and sow them in their proper places, then with a flat beating beetell you shall fixe it fast upon the face of the earth.

There be other wayes of beautifying Gardens, as to distingue the knots either with Tileshards, with the shankbones of shepe, and other small cattell, with great Coggelstones, and a world of other things like unto these. But I haue you long in this ill-savourred Garden, if it please you we will walke into the Orchard adioining.

Both the Garden and the Orchard as you see are inclosed with Of Or-
severall hedges and ditches, whereby they are defended from
hurtfull beasts and unculy folks (as I told you at the first) when
I began to speake of the enclosing of Gardens and Orchards.
Some doe grow and spring of themselves: a number of others
againe are to be sowne. Those that grow wilde without the la-
bor of man, doe bear their frutes each one according to his
hinde: but those that are set and weare, doe yield greater increase.
There are divers againe that are alwaies grene and doe never
lose their leafe, which are (as Constantine reporteth) these, the
Date, the Apple (in the latoun the Cypton), the Bay, the Olives,
the Cypresse, the Pine, the Holly, the Rose, Myrtle, Cedar,
and Juniper. As for strange Trees, and those that will growe
no bernes but meadow, doe full and maddle in thall: we will
therefore begin first with those that yield no frumente, & boare
fruit,

138 The second Booke, entreating

fruit, and those are divided into three sortes : for either of the sorts
they come to be Trees as the Olive is, or else shrubs as the
white Date, or neither Tree nor Shrub, as the Wine.

I H E A. I desire to heare your opinion of every sorte, for I
thinke it no smal skill to plant such faire Gardens, Orchards,
and Vineyards. Perchynnes you have used a wonderfull good or-
der, that among all your Wines, you haue intermixede Olivetrees,
Figgetrees, Almonds, and Apricots, and that you haue reuered
your Orchard from your Garden, & your Vineyard from them
both, with faire hedges and ditches.

M A R C H 5. It was neverfull to doe, least my folks labow-
ring in some of them shold come into the rest, contrary to my
pleasure. First, if you will, I will speake of those that bring us
fruit, and then of the wilde, and the order of setting and planting
of Willdewes. First (as Columella saith) that ground that serveth
for an Orchard, will serue for a Vineyard, as you see it ooth here;
and if the ground be hilly, rugged, and uneven, it is more mate
for a Vineyard than for an Orchard. If therefore you will make
an Orchard, you must chuse such a ground as is mate for it : a
rich ground, leuell, and lyng upon the Sunne, which when you
have found, you must well enclose it : as I taught you before in
the enclosure of Gardens, that it may be out of danger of Cattell
and knaves : for although that the trampling, and dunging of
Cattell, is not unprofitable to the Trees, yet if they be either han-
sled or broken whiles they be young, they will soon come to
nought. When you meane to delyve your Orchard place thing
fenced, you shall make your furrowes a yere before you plant
them, so shal they be well washned with the spoune of the raine:
and whatsover you plant, shall the fower take. But if you will
wishes plant the same yere that you make your furrowes, let the
furrowes be made at least two moneths before : after all them
full of raine and set it on fire. The bryader and bolder that you
make your furrowes, the fairer and more fruitfull will your trees
be, and the frukt the better. Your furrowes must be made like an
oven, or furnace, wider at the bottomme then aboue, that the roote
may spreare the better, and the colde in winter, and the heate in
summer, may the better be kept from it, and also in slope
groundes, the earth shall not so easly be washed away. In setting

How to
make an
Orchard.

of your fruit trees and vines, you must place them in order, either Checkerwise, or Retiwise: which needfull order of setting, is not onely profitable, by receyving the ayre, but also very bea-
utifull to the eye: when as which way soever you looke, you shall
see them stand in ranke, and which also is to god purpose, soz
the Trees shall equally receive their moisture from the ground.

I have used two sortes of this called order, one wherein my
Trees stand foursquare like the Chequer or Chessebord: the
other not in square as the first but Losing-wise or Diamond-
wise, like the glasse windows or gretes. You must frame it ac-
cording to the nature of the trees, least the lower sort be devoured
of the higher. You must also set them a good distance asunder,
that their branches may spread at pleasure, soz if you set them
too thicke, you shall be able to sow nothing betwixt them, and
they will be the lesse fruitfull. Therefore Palladium would have
the space betwixt them, thirty foote at the least: there is more
profit in the generall disposing of them, entermedling the greater
with the lesser, so as the great ones doe not annoy their un-
derlings, either with their shadowe or dropping, soz that they
grow not equall to them in strength or bignesse. Pomegranats
and Myzles must be sowen nearer together, as nine foote a-
sunder, Apples nearer then they, and Peares nearer then them
both: but of them there are sundry sortes. Almonds and Figtrees
must also be set nearer. And because there is a naturall friend-
ship and love betwixt certain Trees, you must set them the nearer
together, as the Wine and the Olive, the Pomegranate and
the Myzell. On the other side, you must set farre asunder such as
have mutuall hatred among them, as the Wine with the Filbert
and the Way. There are some of them, that desire to stand, two &
two together, as the Chesnut: the droppings also do great hurt
of all sortes, but specially the droppings of Dakes, Pinetrees, and
Walsholmes. Moreover, the shadowes of divers of them are hurt-
full, as of the Walnut tree, whose shadowe is vnwholesome
for men, and the Pinetree that killeth young sprynge: yet they
both resist the winde, and therefore are best to be set in the outer
sides of the Orchards, as hereafter shall be said. Of the place &
the order, perhaps you thinke I have said enough, and looke that
I should proceed to the order of planting and setting.

Dropping
of trees.

Friends
amongst
Trees.

Shadowes
of Trees.

Time of
planting.

Time for
grafting.

The ob-
seruation
of the
Moones.

The kinds
of plan-
ting, and
grafting
of trees.

Three
kinds of
Grafting.

What
trees are
best to be
grafted be-
twixt the
bark and
the wood.

What
trees are
best
together.

Understand then, the chiefeſt time of planting (as Florentine ſaith) is the end of Summer, for then is nature moſt occupied about the roote, as in the Spring about the upper parts: and therefore grafting is meſteſt in the Spring, and ſetting in the end of Summer: for the plants are watered all the Winter, & therefore it is beſt ſetting or planting, from the ſetting of the ſeven Stars, untill the twelfth of December. In the Spring time, you may ſet thofe things that you forgaſt before: at what ſeafon ever it be, loke that you ſet them in the afternoones, in a faire weſterly wind, and in the wane of the Moone. Pliny ſaith, that this note is of great impoſtance for the encrease of the Tre, and goodneſſe of the fruit. If the Tre be planted in the encrease of the Moone, it groweth to be very great: but if it be in the wane, it will be ſmaller, yet a great deale more laſting.

We plant either by Grafting, ſetting of the kernell, or the ſtone, ſetting the rootes, ſtockes, or ſlips, grafting betwixt the Barkes and the Tre: ſome are planted in ſome of theſe ſorts, other in all. In Babilon (as they ſay) onely the leafe ſet, comes to be a Tre: firſt I will ſpeak of Grafting, and then of the reſt. There are that appoint but thre kinds of Grafting, betwixt the bark and the wood, in the ſtocke, and implaſteing, or inoculation. The firſt ſo: they call Grafting, the ſecond imbranching, the third inoculation, or imbuſſing. Such Treſ as haue thickest barkes, and draw moſt ſappe from the ground, are beſt grafted betwixt the bark and the wood, as the Figge, the Cherrie, and the Olive: thofe that haue thin rindes, and content themſelues with leſſe moſture, as if the ſappe leaſing the bark ſhould gather it ſelfe to the heart, as the Drenge Tre, the Apple Tre, the Wine, and diuers others, in theſe it is beſt to open the Stocke, and graffe the wood. Some Treſ are alſo beſt Grafted upon other ſome, the Figge that prospereſt beſt upon the Mulberry Stocke, and the Plane Tre: the Mulberry upon the Chestnut, and the Beech, the Apple, the Peare, the Olme, and the white Poplar, wherein iſ you graffe, you haue your Mulberries white: upon the ſame Stocke are graffed the Peare, the Quince, the Medler, and the Herblisſe: the Peare upon the Pomegranate, the Quince, the Mulberry, and the Almond. If you Graffe

Cratle your Peate upon a Willowy, you shall have red Peaces: To have
 the Apple is Cratled upon all Peare Stockes, and Crablets, red Peares
 Willow, and Poplar: being Cratled upon the Quince, it & Apples,
 bringeth forth the fruit which the Charkes call Melonella: it is
 also Cratled upon the Plumtree, but bringeth Cratled upon the
 plane tree, it bringeth forth red Apples. The Medlar being
 Cratled upon the Thorne, ther graue groweth to great big-
 nesse, but the stocke continueth small: upon the Pinetree, it
 bringeth a sweet fruit, but not lasting. The Peach grafted
 in the Thorne, or the Birch, groweth to be very faire, and great:
 the Almond and the Peach being joyned together, and grafting
 in the Plumtree, will beare a Peach with an Almond in the
 stone. The Filbert will onely be grafted in the Willdew, not in it,
 agreeing with any other. The Pomegranate delighteth in di-
 vers Stockes, as in the Willow, the Bay, the Ashe, the Dam-
 son, the Plum, and the Almond, upon all which he prospereth
 well. The Damson groweth very well upon any kind of wilde
 Peare, Quince, and Apple: the Chestnut lieth well the Wal-
 nut, and the Birch. The Cherrie refuseth not the companie
 of the Peach, nor the Turpentine, nor they his: the Quince
 will well be grafted upon the Barberie; the Vertile upon the
 Sallow: the Plum upon the Damson: the Almond upon the
 Filbert: the Citron, because of his tender Tre, and thyme
 rinde, will scarcely beare any other grasse, and therefore con-
 tents himselfe with his owne branch. The Vine that is graf-
 fed upon the Cherrie tree (Florentinus promiseth) will beare
 Grapes, & grafted upon the Olive, which bringeth so th a fruit
 that bearing the name of both his parents, is called Elxosta-
 philos. In fine, all young Treas that have sap in the bark, may Olive
 be grafted: if it be greater, it is best grafting near the roote, grape-
 where both the bark and the wood, by the reason of the sterenes
 of the ground are full of sappe. He then that will graft either in
 the Stocke, or besynd the Stocke and the rinde, let him gather
 his grafts from a fruitfull-tender tre, and full of joynts, and out
 of the new spiring, except he meane to Graft an old tre, when
 as, the sturdier Graftes be, the better they are, otherwise the ^{The choice} of Graft-
 last shoothes of such trees as have lately boorne will be the best. ^{of} Graft-
 last shoothes of such trees as have lately boorne will be the best. ^{The} Peule sag,
 must gather them on that side the tre that lyeth upon the
 north:

þowþ soþer and þelt not by þe firme þan the shawþre. Ver
gill forbiddeth those that growþ on the top, thinking them
better than growþ out of the side. To be short, your grasse
must be full of bides, lately growne out, smoothe, the rinde
friþe; goodlynges to grow, they must be of the last
yeareþ yeaþre, þe chayldeþre by the knoteþ. knotes that
declinateþ yeaþre to minde, knotes of all treeþ are not
to be gathered alþe. If þe limes and fagge treeþ are not yett in
the midde þaþt, addid tane best of þe top, and þe treeþ from
þemþ you must gather your Grasse. Olives are full of
sappe in the midde, and the outer parts of þem. Those best agree
together, þe þimeþ are full of natice, and are blagome,
and beare both about a time. You must gather the grasse in
the wane of the þare, tenne dayes before you Gaffe them.
Conſtanþe addeth this reason. That it is neede the Gaffe doe
a little wither, that he may the better be receaved of the stocke.
You must appoint your grafting time in the spring, from March,
when as the buds doe begin to buren, but not come out (al-
though you may graffe the pearre when his leaues be out) un-
till May : for Grafting in raine is profitable, but not for im-
branching. The Olive, whose sprynge doþ longest bud, and
have much sappe under the bark, the abundance whereof doþ
hurt the Gaffe, must be Grafted (as Florentine sayth) from
May, till Junne. Columella would have the Olive Gaffed from
the twelue of March, till the first, or the sixt of Apill, and the
time of Grafting to be the Moone increasing, in the afternoone,
when ther blowlith no Southwinde. When you have found a
good Gaffe, take your knife (being very sharpe) and pare it a-
bout þre fingers from the ioynt downward, so much as shall
be meete to be set in the stocke: that part that is under the ioynt
(not perishing the pith) you must cut with your knife, as if you
should make a pen, so as the wood with the wood, and the bark
with the bark, may ioyne together, as iust as may be. Which
being done, if you meane to graffe in the stocke, you must first
saw it smoothe, then cleave it in the midle with a sharpe knife,
about þre fingers: and to the end you may handsomely put
in your Gaffe, you must have a little wedge of wood or iron.
(Pliny thinkes it better of bone) which wedge (when you will
graffe

The time
of grafting

The man-
ner of
grafting.

graft betwene the rinde and the stocke) must be made flatte
on the one side, and round on the other, and the Grafte must be
pared also flat on that side that must stand next the wood, taking
alwaies god hede , that the pith be not perished : the other
part must onely have the rinde pulled off, which after you must
set in the cleft, or betwixt the barke, till you see all parts agree
together. Some doe cut the point of their Grafte thasquare,
so as two sides are bare, and the other covered with his barke :
and in that sort they use to Grafte in a stocke one against ano-
ther : but it is thought best to Grafte no more but one. When
you have thus set in your Grafte in the stocke, plucke out the
wedge : but here is a great carefullnesse , and heed to be used :
and therefore god Grafters, thinke it best to hold the Grafte
even with both hands, least in the binding and pulling out of
the wedge, the Grafte be hurt, or stand uneven. So; aboyding
of which, some use so to binde the stocke about, and after to put
the wedge, the bands keping it from opening too wide. The
harder they be set in, the longer will they be ere they beare, but
will indure the better : you must take hede therefore, that the
cleft be not too slacke nor too straight. When you have thus
Grafted, binde the stocks with a twig, and cover it with
loame, well tempered with chasse, two fingers thicknesse , and
(putting mose round about it) tye it up so, that there come no
raine at it, nor be hurt with the sunne or the winde. This is the
order both in the old time, and at this day used : though in Co-
lumellas time (as it appeareth) they were not wont to Grafte,
but onely betwixt the barke and the wood: for the old people (as
Plinic wryteth) durst not as yet meddle with cleaving the stocke:
at length they presumed to make holes, and Grafte in the pith,
and so at last waxed bold to cleave the stocke. Cato would have
the stocke covered with clay and chalke, mingled with sand and
Dre-dung, and so made in morter. Sometime they Grafte with
the top of the Grafte downeward, and they doe it to make a lit-
tle tree spred in breadth. It is best Grafting next the ground,
if the knots and the stocke will suffer: and Plinic would have
the Grafte groworth not above sixe fingers. If you will Grafte To keep
a little tree, cut it nere the ground, so as it be a stoke and a yow
halfe high. If you would carry your Grafts farre, they Grafts
will

144 The second Booke, entreating

will longest kepe their sappe, if they be thrust into the roote of a Rape: and that they will be preserved, if they lye betwixt two little guts, running out of some River or fish pond, and be well coveted with earth. Now for inoculation or implaſting which is no new manner of grafting, we finde that it was uſed of the Latines, and the Greeks, when taking off a lease or little bud, with ſome part of the rinde with him, he graft it into another branch, from which we haue taken as much batke. This order (Columella saith) the husbands in his dayes were wont to call implaſting, or Inoculation: and before Columellas dayes Theophrastus in his Booke De cauis Plantarum, doth shew the reaſon of Inoculation. Plinie doth ſay it was ſtill leaued of Dawes, hidynge of ſeede in caves and holes of Trees. This kinde of Grafting, as Columella doth write, and our Countrymen themſelves confeſſe, is best to be ued in Summer, about the twelue of June: yet Didymus ſaith he hath Grafted in this manner, and hath had good increase with it in the Spring time. And ſith it is the daintiell kinde of Grafting, it is to be ued in all Trees, but onely in ſuch as haue a ſtrong, a moyst, and a ſappy rinde, as the Olive, the Peach, the Figge, the Apple, the Pear, the Cherry, and divers others trees which are full of milke, and haue a big batke. Of that Tree that you meane to Grafte, chouſe the youngell and the faireſt branches you can, and in them take the bud that is likeliell to grow, and marke it round about two inches ſquare; ſo as the bud ſtand even in the midſt, and then with a ſharpe knife cut it round about, and ſlaw off the rinde, taking god haſte you hurt not the bud, and take out the piece. Afterwards, goe to the Tree you meane to Grafte on, and chouſe likewiſe the faireſt branch, and pace away the rinde a little ſpace, and ſayne in your bud ſo iuſt, as the rindes may agré together ſo cloſe, as neither water nor winde may enter in. You muſt take that you hurt not the wiſe, and that the rindes be of one thickneſſe. When you haue thus done, binde it up, ſo as you hurt not the bud: Then clay it ouer all, leaſing libertie enough for the bud. Cut off all the ſpring that growes about it, that there be nothing left to draw away the ſappe, but that it may onely ſerve the Grafte: After one and twentie dayes, unclouſe it, and take off

your

your covering, and you shall set your bud incorporated in the branch of a strange tree. Columella speaketh of another sort of Grafting, to boze a hole in a Tree with an Augre, either to the pitche, or the uttermost rinde, going something slopewise downward, and getting out all the chips cleane, take a Wine, or an armie of the best Wine, not cut from his old mother, & pating away the ober rinde, thrust it fast into the hole, being all moist and full of Sappe, leaving a bud or two onely upon it; after ward, stoppe the hole well with Mose and Clay, and commit it to the earth. In this sort you may Graft Wines upon Climes, so shall the branch live, being both nourished with the old Mother and the new Father. Two yeres after, you shall cut off the new grafted branch, and the Stocke wherein you grafted, you shall sawe off a little above the bozing, so shall the grasse become the gre atest part of the plant. The like doe our Countrymen, taking a branch of a Birch a foyte thicke: and when they have cut it, and bozed it, they set in it the branches of the best Pease or Apple that they can get, setting the same in a very wet ground in March; and in the same Moneth the yere after, taking up the Birch, they cut it asunder with a saw betwixt the holes and the branches: and every piece of Stocke with his branch, they set in very rich and fruitefull ground. There are some that brag of another kind of grafting, not much unlike to the former, whereof notwithstanding, Aelian in Constantine maketh mention, as tried in a Peach. They will a man to take the branch of a Willow as big as your arme, and two Cubits in length, or more: this they would have you to boze though the midst, and after slipping off the branches of a Peach as he stands, leaving onely the top untouched, they would have you to make the Peach passe through the Willow batte, and that done, to boze the Willow like a bow, setting both his ends into the earth, & so to binde the hole up with mose, mortar and bands. The yere after, when as the head of the Peach hath soyned himselfe with the pith of the Willow, that both the bodies are become one, you shall cut the Tree beneath and remoove it, and raise up the earth, so as you cover the Willow bole with the top of the Peach; & this shall bring you Peaches without stones. This kind of Grafting must be done in most pl-

Wimble
Grafting.

Another
manner of
Grafting.

Propagation, and his
kindes.

cos, and the Willowes must be holpen with often watring, that the nature of the Treē may be of force. The kinds & maners of propagation, are declared by Pliny, who tellith of two kindes: the first, wherein a branch of the Treē being bowed downe, and buried in a little furrow, and after two yeres cut off, and the plant in the third yere removed: which if you intend to carrie any farre distance off, it is best so: you to burie your branches in Baskets, or earthen vessels, in which you may aptlyest carrie them. And another more delicate way he speaketh of, which is to get the roote out of the very Treē, laying the branches in Baskets of earth, and by that meanes, obtaining rootes betwixt the very fruit and the tops, (for by this meanes the root is fatched from the very top, so farrs they presume) and from thence fetch them, using it as before: in whch sort you may also deale with Rosemarie and Savine. Columella sheweth a way, how slippes of all manner of Treēs may be grafted in what Treēs you list.

T H R A. And some are also set of the slips, or slipings: my selfe have plucked a branch from a Gulberrie Treē, and brusing the end a little with the Mallet, have set it in the ground, and it hath growne to be a saite Treē. The like hath biene tryed (as they say) in Apples and Peares.

M A R I V S. You say well, for Nature hath shewed us, that the young scences, plucked from the rootes of the trees will grow: the youngest are best to be planted, and so to be pulled up, as they may bring with them some part of their mothes body.

In this sort you may plant Pomegranates, Filberts, Apples, Hervilles, Medlars, Ploms, Figgis, but specially Vines, and sometimes Cherries, and Myrtilles. Of the hocke and the branches are also planted the Almonds, the Peace, the Gulberry, the Denge, the Olive, the Quince, the Ivie, and the Turkish Plome: whiche the ostner you remove them the better they prove. Pliny sayth, the branches cut from the Treē, were at the first onely used for Hedges; Elder, Quinchess, and Briers maddled together: afterwards for use, as the Poplar,

the Alber, and the Gerfallow; at this day we set them where we best like. Wee must be taken, that the stockes, or the sets be of a good kinde, not cracked, knottie, no; secked, no; slenderer then that a man may well gripe with his hand, no; lecher then a foot in length.

T H R A. It remaineth now that you speake of the setting of the fruit of kernell.

M A R T I V S. Nature (as Pliny saith) hath taught us to set the kernell by the sences deuoured of Birds, and moistned with the warmth of their enthalies, and after boyled in the doughes and ries of Trees: whereby we finde many times a Plane Tree growing out of a Baye, a Bay out of a Cherry, and a Cherry out of a Willow. Many Trees are set of the fruit, kernell, or stone, which grow partie of themselves, by reason of the falling of the fruit: as Chestnuts, Hazelnuts, and Walnouts. Columella saith, they are the fruitfuller Trees that spring of their fruite, then those that are set of the stocke, or the branched. Some delight to beset in Trees, and not in the ground: when they have no soyle of their owne, they live in a stranger. Of the fruit are kernell, or planted Nuts, Almonds, Pistaces, Chestnuts, Damsons, Plums, Pineapples, Dates, Cyprisse, Bayes, Apples, Peares, Maples, Fiftrees, Cherries, Peaches, & Apricotes: but set or planted they prove to be the hindliest. Some of these doe grow in Gramming and other wayes: experience teacheth, that the Nut and the Chestnut are Grammed; and Nicageron winched as much: neither are all fruits, kernels, and stones set in like way, as hereafter shall be shewen. Some are laid in water before, others not: some are dry & bayed in hony and water, and at the fall of the leafe are buried in the ground till March: and then let Nuts are onely layd in moist dung a day before, and some in water and hong onely a night, leaff the pinng of sharpenesse of the hony delivry the sprout. Some are set with their toppes standing upward, as the Chestnut others downward, as the Almons, though this is not greatly to be regarded, if the tree sic the fruite that falleth from the Tree, or is let fall by Birds, with vnder bell of any other.

B R E T. The ordering of an Apple Garden may not be
passed

passed over, wherein as in a Parke, the young Plants are nourished. And because the Sunne sometimes ought to be harder, & tenderer than the Mother, a mite ground must be chosen for the purpose: that is, a ground dry, fat, and well laboured with the Hattocke, wherein the stranger may be wel cherished, and very like unto the soyle, into which you meane to remove them. The kernels, or stones, must not be altogether naked, but a little covered with some part of the fruit, so shall they afterward endure the longer. They must be set a fote, or thereabouts asunder: After two yeeres they must be remov'd: & because their roots doe runne very deepe into the ground, they must be somewhat bent, or turned in, to the end they may spread abroad, and not runne downward. Above all things, you must see it be free from stones and rubbish, well fenced against Poultry, and not full of chunckes, and clifts, that the Sunne burne not the tender rootes: they must be set a fote & a halfe a funder, that they hurt not one the other with their nesse growing. Among other evils they will be full of vermines, and therefore must be well taken and weeded: beside graulynge ranke they must be scummed and pruned. Carrowards have them covered over with Lattules upon forkes, to let in the Sunne, and to keepe out the cold: Thus are the kernels of Peares, pine apples, Nuts, Cypresse, & such others cherished. They must be gently watered for the first three dayes at the going boone of the Sunne, that they equally receyving the water, may open the scuter. 2. Ziphs, or Luckey plumbs, Nuts, Walnutes & Chestnuts, Walles, Cherries, Pistachies, Apples, Dates, Peates, Naples, Fifters, Plumbs, and divers of them are set of the stone w/ kernels. If remov'ing of them have the riall regard, that they be set in the like soyle, or in better, not from hot alms toward grounds, into cold & backward, nor contrary from those to the other. You must make your furrows so long before, if you can, that they be overgrown with good mould. Carrowards have them made a pere before, that they may be well season'd with the Sunne, and the weather: 3. If you cannot so, you must binde trees in the middest of them two moneths before, and not to set them, but after a shewe. The depth of their setting must be in stee clay or hard ground, thre Cubites: and soz Plumb trees a handfull more. The furrow must be made fumacellie, straight above, and broade in the

the bottom : and in blacke mould, two Cubites into a hand
bread, being square cornered, never deeper than two fote and a
halfe, nor broader then two fote breadth, nor never of lesser
depth, then a fote and a halfe, which in a wet ground will
quench the water. Such as delight in the depth of the
ground, are to be set the deeper, as the Ashe, and the Ulme :
these and such like, must be set foyre fote deepe, the others it
sufficeth if they stand thre fote deepe. Some use to set under
their Rootes round little stones, both to containe, and convey
away the water : others lay gravelle underneath them. The
greater Trees are to be set toward the North and the West, the
smaller toward the South and the East. Some will have no
Tree remov'd under two yeare old, or above thre : and others
when they be of a yeeres growth. Cato resulth Virgils authority
that it is to great purpose to make the standing of the Trees, as
it grew at the first, and to place it towards the same quarters of
the heaven againe. Others observe the contrary in the Vine,
and the Figge tree, being of opinion that the leaves shall there-
by be the thicker, and better defend the fruit, & not soone fall ;
beside, the Figge tree will bee the better to be climbed upon.
Moreover, you must beware that by long tarrying, the rootes haue
not withered, nor the winde in the North when you remoue
them, whereby manytimes they dye, the husband not knowing
the cause. Cato condemneth utterly all manner of windes or
storimes in the remouing of Trees, and therefore it is to great
good purpose to take them up with the earth about them, and to
cover the rootes with a Turfie, and for this cause Cato woulde
have them to be carryed in Baskets filled with earth up to the
toppe : the Tree must so be set, as it may stand in the middest
of the Trench, and so great heed must bee taken of the rates,
that they be not broken, nor mangled.

Among all Trees and plants, the Vine by god right chal- The Vine,
lengthy the soberaignety, seeing there is no plant used in bus-
bandry more fruitfull and more commendious than it, not onely
for the beautifullnesse, and godlinesse of the fruit, but also for
the easinesse he hath in groowing, whereby hee resulth not al-
most any kinde of Country in the whole world, except such as
are too extreameley stratched with the burning heate of the sunne,

it selfe is extremely frozen with the behement cold ; prospering also as well in the plaine and champion Country, as it doth upon the hilly and Mountains Countrey : Likewise as well in the stony and fast ground, as in the soft and mellow ground: And oftentimes in the Lormy and leane ground as in the fat and flegie, and in the dry, as in the moist and miry; yea, and in many places, in the very Rockes it groweth most abundantly and most fruitfully, as is to be seene & prooved at this day about the River of Rhins in Germanie, and the River of Mosell in France : and above all this, it best abideth and beareth the contrary disposition of the heauens.

The invention of the Vine.

It was first found out by the Patriarch Noah, immediately after the drowning of the world : It may be, the Wine was before that time, though the planting and the use thereof was not then knowne. The Heathen both most falsly and very sondly, as in many other things, doe give the invention of the same unto the God Bacchus. But Noah lived many yeares before either Bacchus, Saturnus, or Vranus were borne.

The Vincyard most gainefull.

There wants not great and learned men, that affirme the Wine to be most gainefull : and declareth that olde frutesmistes of the Wines, mentioned by Cato, Varro, & Columella, which upon every Acre yelde seaben hundred Gallonds of Wine, and the Vineyards of Scnec, wherin he had partly upon one Acre 1000. Gallonds: when as in Corne ground, Pasture, or Elod land, if a man doe get upon one Acre xx. s. a yare, it is thought a great matter.

The ordering of the Wine-bearing Wines, as the sorts of Wines are sundry, neither can they be contained in certaine numbers, for there is as many sorts, as there is of ground. Homer giveth the chiefeſt prayſe to the Wine of Maronia, and Pramnium. Virgill most commendeth Rhenish wine: others the wine of Amnis, Lamentana, Candy, and Corfega, but I means to ſpeak of thoſe that are commonly in our dayes. In Italy at this day they make moſt account of wine of Corfega, Romani, & Meyfina. In Spaine they beſt alleine the wine of S. Martine, of Ribodari, and Gibralter. In French the greatest prayſe is given to the wine of Orleans, Anjou, & Greves: Germanie began but ſlately to meddle with planting of Wines, ſay Varro witteth, that

the

the Frenchmen and Germanes had in his time both Wines and Olives: but at this day the Rhine, the Necker, the Mene, Mosel, and Danaw, may compare with any Countries, for goodness of their Wines.

The Vine may be planted five sundry wayes: for either his branches are suffered to runne in safety upon the ground, or else without any stay groo vp right, or having a stay or prop set for them, they climbe up by it, or else runne up by a couple of stiffe props, called of Lycie a yoke, or else sustained with sounre of those yoakes, which of the resemblance that they have with the hollow gutters of a house, are said to be guttered: others againe suffered to runne upon frames like Arbouris, serving to sit under, and are called Arbour Wines: others runne vp the walles of houses. Moreover, the yoaked Wines, are tyed together, and joyned with thre or sounre props, as if they were yoaked: some doe let them cuane upon trees, as commonly in Lombardy, they Trees
which be
friends or
foes to the
Vine. are suffered to climbe upon Elmes, Willowes, and Ashes, where they greatly prosper: neither doe they like all manner of trees, for they hate the Nut tree the Bay, the Radish, and the Coll: as againe, they love the Poplar, the Elme, the Willow, the Figge, and the Olive tree. The Wines that are yoaked, or stayed vp with props, receive more ayre, and beare their fruit the higher, & ripe the better, but aske more trouble in the looking to: and these are so ordred, that they may be plowed, whereby they are the mo: fruitfull, because they may the oftner, and with the lesse charge be tilled. The Wines that creep upon the ground, make much Wine, but not (as Columella saith) so good.

TH R A. Now to your ordering of them.

M A R I V S. First, I will speake of the ground, and of the digging of it, and after of the planting and cutting of them. And first you must take so: a speciall note, that every Vine will not agree with every place, nor yeld his Wine in like godnesse, of such force is the qualitie of the ayre, neither will all kinde of ground serve: For Columella doth counsaile to set the Vine in a wilde ground, rather then where Corne or bushes have growne: for as so: old Vineyards, it is most certaine, they are the wo:st places of all other to set new in, because the ground

What
ground is
best for
the Vine,
is

is matted, and as it were netted with the remaines of the old rootes: neither hath it lost the posson of the rotten and old skinning Notes, wherewith the soile (gluttred as it were with venime) is benummed: and therefore the wilde and untillled ground is chievely to be chosen, which though it be over-growne with shubbes and trees, may yet easily be ridde. If such wilde ground be not to be had, the best is the plaine champion land without trees: if neither such a ground, then the light and thin bushie ground, or Olive ground. The last and worst (as I said) is the old rotten Vineyard, which if necessarie compell you to take, you must first rid the ground of all the old rotten rootes, and then cover it either with olde dung, or with the newest of any other kinde of manuring: the rootes being thus digged up, must be laid up toghether, and buried. After must the ground be considered, whether it be mellow and gentle: It is thought to be god, that is something gracie and gravelly, and full of small pebbles; so that it be mingled with fat mould withall, which if it be not, is utterly disallowed.

Dame Ceres joyes in heavy ground, and Bacchus in the light.

You shall perceive it to be massie and thicke, if being digged, and cast into the hole againe, it riseth over: if it scarcely fill the hole, it is a signe that it is light and thinne. The Flint, by the generall consent of husbandmen, is counted a friend to the Wine, specially where it is well covered with god mould: for being cold and a keper of moisture, it suffereth not the rootes to be scalded with the heate of Sunnmer: so much that Columela doth use to lay certaine stones about the side of the wine trees, so that they exceed not the waight of five pound a piece: which as Virgill hath noted, keepes away the water in Winter, and the heat in Sunnmer.

Hurle in the thirkie stome, or therein throw the nastie shelles.

So do we set the banks of the Rhine being full of those stones, to yield an excellent god Wine: but the stones that lye above ground, are to be cast away: for in the Sunnmer, being heated with the Sunne, they burne the Wine, and in the Winter they hurt them with their coldnesse, contrarie to those that lye in the bottome. But the best of all is the soote of an hill, which receiveth the falling mould from the toppes, or the bally,

bally, that with overflowing of Rivers hath biene made rich. Neither is Chalkie ground to be refused, though the Chalke of it selfe that Potters use, is hurtfull to the Wine. The hungry sandy ground, the salt, bitter, and thirkie ground, is not meete for the Wine: yet the blacke and reddish sande, medled with some moist earth is of some allowed well enough. Moreover, neither ground too hotte, or too colde, too dry, nor too moist, too slender, nor too stiffe, that will not suffer the raine to sinke, is to be used for Wines; soz it will easily gape and open, whereby the Sunne comming in at the craibesse, doeth burne the Rootes: That againe which is overthinnne, letting in as it were by vents, the Raine, the Sunne, and the Winde, doth drye up the moisture of the rootes: the thicke and stiffe ground is hardly to be laboured, the fat ground subject to too much rankenesse, the lean ground to barrennesse; wherefore there must be an even temperatute amongst these extremities, as is required in our bodies, whose health is preserved by the equall medlie of heate and colde, dryth and moisturē, fulnesse and emptinesse, or thickenesse and thinnesse: neither yet is this temperatute in ground for Wines so justly to be evened, but that there is required a more enclining to the one part, as that the earth be more hot then colde, more drye then moist, more subtil then grosse, specially if the state of the Heavens agree. Against what quarter thereof the Vineyard ought to lye, it is What an olde controversie, some like best the rising of the Sunne, quase of some the West, some the North: Virgill misliketh the West: the heaven others againe thinke the best lying to be upon the South. But in generall, it is thought best in colde Countries, to gaue. ^{the vine} have it lye toward the South, in warme Countries upon the East, in hot burning Countries, as Egypt and Barbarie, upon the North. Plinic would have the Vine himselfe stand towards the North, and his spryngs, or shotes towards the South. A fit ground and well lying, being found out, must be diligently digged, dunged, and weeded: all unprofitable weeds must be pulled up, and throwen away, lest they shold spring againer either corrupt the young plants, or hinder the labourer. The Vine is planted according to Virgils rule, in the fall
of

The time
for planting
of Vines.

of the least, but better in the Spring, if the weather be rainy, or cold, or the ground be fat, champion, or a watry valley; & best in the fall of the Iaze, if the weather be dry, & warme, the ground drye and light, a barren, or a rugged hill. The time of planting, in the Spring (as Columella saith) endureth forty daies, from the Ides of February, untill the Equinoctial: and in the fall of the leafe, from the Ides of October, to the Kalends of December. Cassian in Constantine, being taught by experience, saith, in watry grounds you shoulde rather plant in Autumn, when the leaues are fallene, and the plants after the Vintage deliuered of the burden of their clusters, sound and strong, before they be nipp'd with the frostes, for then they best agree with the ground, nature applying her selfe wholly to the nourishing of the roote. The time of grafting, Columella saith, is of some extended from the first of November, to the first of June, till which time the shote or grasse may be preserved: but it is not well liked of him, who rather would have it to be done in warmer wea'her, when the Winter is past, when both bud and rinde is naturally moued, and is safe from cold, that might annoy either the Crafte, or the Stocke: yet he granteth (when hastes requireth) it may be done in the fall of the leafe, when as the temperature of the ayre, is not much unlike to the Spring: for which purpose, you must chose a warme day, and no wind stirring. The Grafte must be round and sound, not full of pith, but of buds, & thicke of ioynts, the Ten iwt whereof must not excede thre inches, and smooth, & even cutte: the Stocke and the cleft must be well closed with clay and molse. Those that grow toward the South, must be mark-ed.

The like is to be done with all other Trees. Of planting of Vines, there is two wayes, the one of the Roote, the other of the banch, or spray: The Roote is counted a great deale better then the banch or set, by reason of the soverainesse, & vantage that it hath, in that it hath already taken roote. The Roote is set in ffre ground, well digged and laboured, in a trench of thre foote, the set or spray, in a gentle and melloie ground: in dry ground, it is neither good to set the Roote, nor the Banch in a dry season: it is best to plant in the fall of the leafe in a hot season, & in a colde and moist, in the Spring: in much wet you must set them thin-

What
Graffes to
be chosen.

ter, in great blyth, thicker: in what sort you shall make a Rose Garden for Wines Palladius teacheth you. The set requireth a time to rōote, & being removēd will bearē the better fruit. The rootes doe bearē fruit the second yere, or sooner: the Sets, or Branches, scarſe in the third or fourth yere, though in ſome places ſooner. Didymus in Conſtantine teacheth an eaſie and a reaſie way of planting the Quickſet, which is, to take of a strong and ten yere Wine, the longest and faireſt branch, that groweth loweſt, a ſote from the ground, and laying it long in a Trench of a ſote depth, to cover it with earth the ſpace of ſome joyns: and if the branch be ſo long, as it will ſerve for two bur-nings, you may make therof two rootes. You muſt not ſuffer rootes to cumme up upon one ſtay, but allow every roote his ſup-poſter.

The Branches, or Set that you meane to plant, you muſt cut from a very fruitfull and flouriſhing Wine, that hath boone ripe & perfect god fruit, full of roynys, & not any way tainted, but whole & ſound. Of ſuch you muſt chouſe your Sets, & not of young Wines, that are weake and feeble, but ſuch as are in their chiefe ſtate. Moreouere you muſt gather your Set, not of the highest, nor the loweſt, but from the middeſt of the Wine: the Set muſt be round, ſmooth, full of knots and roynys, & many little burgeons. As ſone as you haue cutt off, loke that you ſet it: for better doth it agree with the ground, and ſooner grow. If you are di-uen to keepe them, burie them in the ground either loose, or loosely bound: and if the time be long that you meane to keepe them, you muſt lay them in empie barrels, ſtratowing earth under them, and upon them, that the earth may lie round about them: and the barrel you muſt stop closely with clay that there enter neither winde nor raine. So ſhall you preſerue them two moneths in their godneſſe. Such as are ouer bie, you muſt lay them in water ſome and twentie houres aſſoe you ſet them, and you muſt ſet two Sets together, that though the one faile, the other may take: and if they both grow, you may take up the leſſer of them: you muſt not make a medley of ſum̄ y ſots, ſpecially white and black together: but as Colomella ſaith, muſt ſort them ſenerally. You muſt be-ware that the Sets haue not put out their ſprings, and that

you set not a withered ſet. Conſtantine would have the ſet ſomething crooked, affirming that it will the ſooner take rote. You muſt lay about them thre or four ſtones, and then raife the earth, that it may equally iwiſh the dung be troden downe: fo: the ſtones keþeth the earth ſicke, & as I ſaid before, coleþeth the Roote. Both the ends of the ſet you muſt annoiſt with Oue dung, fo: the killing of the wormes: as for the length, if it be full of ioynts, it may be the ſhorter, if it haue few ioynts, you muſt make it the longer, and yet not exceeding a ſoote in length, no: a ſhaftman in ſhortneſſe, the one fo: being burnt with oþer dynges in Hunner: the other, leaſt being ſet too deepe, it be with great hardneſſe taken up, but this is fo: the leuell ground: fo: upon hilſ, where the earth ſill falleth, you may haue them a ſoote and a hand bredth in length. Florentine would not haue the trench leſſe then four ſoote in depth: fo: being ſet ſhalloow, they ſooner decay, both fo: the want of ſuſtenance, and great heat of the Sunne, which is thought to pierce four ſoote into the ground: though ſome there bee that thinke thre ſoote ſufficient fo: the plant. The Trenches fo: Wines, Virgill would not haue very deepe: but deeper a great deale fo: Treas. Such Wines as you mean ſhall riunne upon treas, you muſt plant thre cubits diſtant from the Tre: afterwards, when they be well growen, and nead to be ioyned with the Tre (which you shall perceiue by his thicknes) you ſhall lay it downe in length, and bury it, till it come within a ſoote of the Tre, ſuffering the remaine to goe at liber, tie, nipping off all the buds with your nailes, except one or two, that it may the better proſper, which when it is growen up, you muſt ioyne by little & little to the Tre, that it may reſt upon it: which part of the Tre muſt be diligenter poyned, and the ſprings and ſciences that grow out of the roote, muſt according to Florenimus, be cut cleane away. The treas, as much as may be, muſt be ſorced to the Eaſt and West, and both the Tre and the Wine, muſt haue the earth well digged, and dunged about them. In rich ground, you may ſuffer the Treas to grow in height, but in barren ground they muſt be pulled at ſeven or eight ſoote, leaſt all the ſubſtance of the Earth be ſoaked up of the Tre. After your planting, you muſt digge the ground every

The length
of theſes.

every Moneth, and wiede it, specially from the first of March, till the first of October; every thirtieth day you must digge about the young plants, and plucke up the wades, specially the grasse, which except it be cleane pluckt up and cast away, though it be never so wellcoveded, will spring againe, and so burne the plants, as they will make them both soule and withered: the sterner you digge them, the more good you doe them. When the Grapes beginnes to alter, you must in hand with your third digging, and when it is ripe, before none when it wareth hot, and after none when the heate decreaseth you must digge it, and raise the dale, which doing defendeth the Grapes both from the Sunne and the Pulse. According to Virgils minde, the Vine must be digged and weeded every Moneth: some would have them digged all the summer long, after every deaw: others againe will not have them digged as long as they bud or buren, for hurting the springs, saying, that it is enough to dig them thrice in the yere, from the enting of the Sunne into Aries, till the rising of the seuen Stars and the Dogge. Some againe would have it done from the Vintage before Winter, and from the Ides of Aprill before it take, and then againe before it flowre, and likewise before the burning houres of the day. In some places when they have digged them, they doe not straight waies covet them, but suffer the trenches to lye open all the Winter: in wet & rayny places they cover them sooner, closing up the roote with earth, and stopping all the passages of the water. Some make the trenches very deepe, & some not passing a foote deepe: and when they have done, they cover them aloft with Oare-dung, Shepes dung, or Hogs dung, or of other Cattell: Privigios dung is the hottest, & such as causeth the Vine fastest to grow, but maketh the wo^rser Vines. The dung must not be layd close to the Vine, but a little distant from it, whereby the rootes that spread abroad may have some helpe of it, and the dung must not touch the rootes, so^r breaking of them: if there be no dung at hand, the stalkes of Beanes and other Pulse, will well serue the turne, which both defendeth the Vines from frost and colde, and kepes them likewise from nosome wormes: the kernels, and the stalkes of the Grapes, doe likewise supplie the want of dung: but

The order
ring of
Vines after
their plan-

is best for
Vines.

Where the
dung must
be layde.

Piss, the
best dung.

The order
of digging
or stirring
the ground.

Dressing
of Vines.

the best of all, is old stale Urine. The plants of a yere, or two yere old, and so forth, till five yeres, must be discreetly digged, and dunged, according to their state: in sandy ground, the best dung is of shape and Coates: and in such sort you must digge the ground, that the earth that lyeth highest, be cast to the bottome, and that which was at the bottome, be layd a. lost: so shall that that was dry, by the moysture within, be helped, and that which was moyst and stiffe, by the heate above be loosened. You must also see that there be no holes nor pits in the Vineyard, but that it lie even. When you have thus digged it, and that the Vines have taken roote the first yere, the rootes that grow about must be cut away with a sharpe knife: so the Vine, if it be suffered to roote every way, it hindereth the depe downe growing of the roote. The Vines that are now of two yeres growth, we must digge and trench about two foote depe, & threesoet broad, according to the rule of Socion. Of those Vines that climbe upon Trees, you must likewise cut off the springes that runne amongst the rootes of the Tree, lest the small roote tangling with the greater, be strangled: and therefore you must leave some little space betwixt the Vine and the Tree. Often digging causeth great fruitfullnesse: good heed must be taken, that the plants be not hurt in the digging: also it must be digged before his flourishing, or shooting out of his leaves: so as immediately therewithall he beginneth to thrust out his fruit, so he that diggeth after the comming forth thereof, loseth much fruit with the violent shaking, and therefore must digge the timelier. Cutting and dressing of the rootes, you must begin in hand with at the Ides of October: so that they may be trimmed and dispatched afore Winter. After Winter digge about the rootes that you have dressed: and before the Sunne enter the Aquinoctium, levell the rootes that you have trimmied. After the Ides of April, raise up the earth about your Vine: in Summer let the ground be oftentimes harrowed. After the Ides of October (as I have said) before the colde come in, you must dress the rootes of your Vines, which labour layeth open the Summer Springes, which the god husband cutteth away with his knife: so if you suffer them to grow, the rootes that grow downe will perish,

and

and it happeneth that the rotes spread all a bove, which will
be subject both to cold and heat: and therefore whatsoever is
within a foot and a halfe, is to be cut off, but so, as you hurt
not the principall. You must make this riddance of the rotes
at every fall of the lease, for the first five yeares, till the Vines
be full growen: after, you must dress them every fourth yere:
such Vines as are joynd with Treas, from the unhandsome-
nesse, cannot be thus handled. Vines and trees, the sooner their
Rootes be thus dressed, the stronger and freighter they will be:
but such as grow upon the sides of hills, must be so dressed, as
the upper rotes neare to the stocke may spread largely, and un-
derneath towards the side of the hill the earth must be banked
to keepe the water and the mould the better. The old Vine
must not have his rote medled withall so: withering, nor be
plowed, for breaking of them, but the earth a little losed with
a Mattocke, and when you have thus dress the rote, lay dung
about it. After this riddance of the rotes, then followeth the
Of Pray-
pryning, or cutting, whereby the whole Vine is brought to one
twigge, and that also cut within two ioynts of the earth: which
cutting must not be in the ioynt, but betwixt the ioynts, with a
slope cut, for avoiding of water: neither must the cut be on that
side that the bud comes out of, but on the contrarie, lest with
his bleeding he kill the bud. Columella appointeth two seasons
for the cutting of Vines, the Spring, and the fall of the lease,
judging in cold Countries the cutting in the Spring to be best,
and in hot Countries where the Winters be milde, the fall of
the lease: at which time both trees and Plants, by the divine
and everlasting appointment of God, yield up their fruit and
their lease. Yet must not your sets be too nearely cut, except they
be very stable: but the first yere they be set they must be holpen
with often digging, and pulling off the leade monethly, while
they beate, that they may grow the better. Pamphilus in Con-
stantine, declareth the time of cutting, or pryingng, to begin in
February, or March, from the fifteenth of February till the
twentieth of March: some (he saith) thought good to cut them im-
mediately after the gathering of the Grapes, lest by bleeding
in the spring they lose their sustenance: though being cut
in the fall of the lease, it springeth the sooner in the Spring.

and if the cold of frost happen to come, it is spoyled. Therefore in cold Countries, it were better to proune it a little, then to cut it thouroughly, that is, to suffer the principall springs & branches to grow. Againe, it is very necessary to cut them in the Spiring: the cuts must be made with a very sharpe knise: that they may be smooth, & that the water may not stand in them, to the engendring of wormes, & corrupting of the Wine: you must cut them round, so will the cut be sooner growen out againe: but Pline would haue them loppe wise, for the better aboyding of the wa-
ter. The branches that be broad, old, crooked, or wrythen, cut awaie, and set young and better in their place. You must make an end of your cutting with as much spedde as you may: from the Ides of December, till the Ides of January, you must not touch your Vines with a knife: for Columella witteseth, that Wines in winter may not be cut. In cutting, remember well to cut it betwixt two ioynts, for if you cut it in the ioynt, you spill it; let the cut be always downward, so shall it be safe both from Sunne and weather. You must not cut them very earely, but when the Sun hath drunke up the frost, or the dew, & warmed the branch: the springs of the sets the first yere, must be cut with god discretion, not suffered to grow too ranke, nor cut too neare, but making the olde set to suffer a spring or two to grow out. Next unto cutting, followeth the propping, or supporting of the Wine: and it is best for the yong & tender Wine not to be stayed up with any strong stay, but with some small thing at the first, and while it is young, it must be daightly tyed to the stay with small twigs of Willow, Lime, Wormes, Rushes, or Straw this latter binding, is thought to be best, for the twigs when they ware dry doe pierce and hurt the rinde.

The best stayes for Vines, as Pline saith, are made of Willow, Oak, Reed, Juniper, Cypresse & Elder. And in another place, he preferreth the Chestnut for this purpose, above al the rest. The best for the Wine, is the Reed, which well endureth five yeres. Gelding of the leanes, & cutting the Wine, is almost in one manner: the gelding of the leaves, or branches, must be done twise a yere, to the end that the superfluous springs & leaves may be plucked off. The first (as Pliny writeth) must be done within ten daies after the Ides of May, before the Wine begin to flowre

Propping
of Vines.

Gelding
or plucking
off of leaves.

for about the tenth of June, both the Wine & the Wheate, the two noble fruits, do flowre. Of the second time, the spinions are sundry, for some suppose it best to plucke off the leaves & branches as sone as it hath left flowing others, when the fruite is full ripe. The superfluous springs being young and tender, are to be taken away, that the Wine may be more at liberty, & through blowen with the winde. This gelding, or cutting away the superfluous branches and leaves is as needfull as the proping: for both the fruit doth prosper the better, & the proping the next yeare wil be the handsommer, & the Wine wil be the lesse full of galles: for that which is cut being green & tender, doth the sooner & the soundlier recover himselfe, & the Grape ripeth the better. Ten daies before the Wine beginnes to flowre, see that you geld it in this sort: Cut off all the superfluous branches, both on the toppe, and on the sides, but meddle not where the clusters grow, strike off the tops of the branches for growing too carke: such Grapes as grow towards the South, or the West, leave them their branches to defend them from the heate of the Sun: cut away most from the young Wine, for over-burdening him. After the heate of the Sunne beginneth to fade, away with the leaves, for hindring the Grapes of their riping: and while the Grape is a flowing, busie your selfe with digging about it. Such Wines, as with thynnes of their leaves corrupteth their fruit, are to be rid of their superfluous branches and leaves a moneth before the gathering of your Grapes, that the winde may blow the better through them: but the leaves that grow aloft in the very top, must not be meddled with, but left as a defence, & shadow against the heat of the Sun: but if so be, the end of Summer be givenen to much raine, and that the Grapes swell in greatnessse, then hardly plucke off the leaves from the top also.

T H A R. One thing I pray you, let me heare more, the signes and tokens of the ripenesse: for as I understand, we may not be too busie in gathering them too sone, nor use any linging after they be ripe, without great harme.

M A R I V S. Yea say true: for being gathered before they be ripe, they will make but small wine, and not durable. And againe, if you suffer them too long, you shall not only hurt the

Vine with the ouer-long bearing of her burden, but also if hayle
or scolt happen to come, you put your Vine in great danger.
Democritus writeth, that the Grapes endureth in his ripenesse
not above six dayes; & therefore the iudgement of his ripenesse,
is not all onely to be givien upon the sight, but upon his taste,
though Columell thinketh there can be no certaine iudgement
givien of the taste. But if the stones doe change their colour, and
be no longer greene, but be almost blacke, it is a signe the
Grape is ripe. Some againe do presse the Grape be lowxt their
fingers, and if they see the stone to slip out smoth, without any
thing cleaving to it, they thinke them mecte to be gathered; but
if they come out wi' some part of the Grape cleaving to them,
they count them not to be ripe. Others prove them in this sort:
Out of a very thicke cluster they take a Grape, and as they be-
hold the cluster well, wherein they see no change, they take it
for a token of ripeness. You must gather your Grapes, the
Moone being in Cancer, Leo, Libra, Scorpius, Capricorne, or
Aquari, and underneath the earth.

Thus much for the Vine in generall, now for particular ex-
periments, as to have it taste more pleasant then the true
nature of the Grape, and to smell in the mouth odouroulis
or as it were perfumed, you shall doe it in this manner: Take
Damask Rose water and boyle therein the powder of Cloaves,
Cinnamon, three graines of Amber, and one of Muske, and when
it is come to be somewhat thicke, take a round Goudge and
make an hole on the maine stocke of the Vine, full as deepe as
the heart, and then put therein the Medicin, then stopping the
hole with Cypresse or Juniper, lay greene waxe thereupon and
binde a lymin cloath about it, and the next Grapes which shall
spring out of the Vine will taste as if they were perfumed or
perfumed.

If you will have Grapes without stones, take your plants
and plant the small ends downeward. The Vine naturally
of himselfe, doth not bring forth fruit till it have beene three
yeres planted: But if evening & morning for the first moneth
you will bathe his roote with Goates milke or Cowe milke,
it will bear fruit the first yeare of its planting.

You may if you please, graffe one Vine vpon another, as the
sweete

sweate upon the sovre; as the Muskadins Grape, or Greeke upon the Kochell, or Burdeau, the Spanish or Iland Grape on the Gascoyne, and the D'leance upon any of all: and these compositions are the best and bring forth both the greatest and pleasantest Grapes.

If your Vine grow too ranke and thicke of leanes, so that the sappe doth wast it selfe in them, and you thereby lose the profit of the fruite, you shall then bare all the rootes of the Vine and cast away the earth, filling by the place againe with ashes and sand mingled together. But if the Vine be naturally of it selfe barraigne, then with a Gouge, you shall make one hole halfe way through the maine body of the Vine, and dive into the hole a round pible stone, which although it goe straitly in, yet it may not fill up the hole, but that the sick humor of the Vine may passe thorow thereat: then cover the roote with rich earth and ore dung mixte together, and once a day so a moneth water it with old wine, and it will make the Vine frutfull; If the Vine be troubled with wormes, Snayles Antts, Earwigges or such like, you shall morning and evening, sprinkell it ouer with Cowes pisse and vinegar mixte together and it will helpe it*.

Cures for
the Vine.

T H A R. Is there no way to make the Grape ripe spedily?
M A R I V S. Plinie teacheth, to rubbe ouer the Rootes with tart Vinegar, and very old Wine, and thus to be often digged, and covered.

T H R A. What order have you so; preseruing of your Grapes when they be gathered?

M A R I V S. Some keepe them hanged up in the roome of chambers, and some in earthen pots, close covered with wooden vessels.

But if you desire (living in a colde country that is hardly capable of the Vine) to haue Grapes in their best and true kinde, most early and longest lasting, you shall in the most convenient part of your Garden, which is over the center or middle point therof, build a round house in the fashion of a round Dovecote, but much lower: the ground vosome whereof shall be above the ground two or three Bricks thicknesse, upon this ground plot you shall place a groundsell, and thereon set yet strong

Strong studds which may reach to the roose; these studds shall be placed better then fourte foote one from another, with little square barres of wood, such as you vse in Glasse windowes, two betwixt every two studds. The roosse you may make in what proportion you will; for this house may serue for a delicate Banqueting house, and you may either couer it with Leade, Slate or Tyle. Now from the ground to the top betweene the Studds you shall glasse it with very strong Glasse, made in an exceeding large square pane, well leaded and Cimented; This house thus made, you shall obserue that through the Brickwork there be made, betwixne evertwo studds, square holes cleane through into the house. Then on the out side opposite against those holes, you shall plant the Rote of your Wine haueing beeene very carefull in the election and choyce thereof; which doone, as your Wine groweth, so you shall draw it throught those holes, and as you vse to plash a Wine against a walle, so you shall plash this against the Glass window on the inside, and so soone as it shall begin to beare Grapes, you shall be sure to turne every Bunch so that it may lie close to the glasse, that the reflection of the Sunne heating the glasse, that heate may hasten on the ripening and increase the growth of your Grapes, as also the house deffending of all manner of euill weather, these Grapes will hang ripe unrotted or withered even till Chistmas. This experiment hath beeene approued in England and found most excellent*.

THRA. I pray you procede with the other fruit Trees of your Orchard.

The Olive. MARIUS. Among other fruit trees next vnto the Wine (as Colomella saith) the chiefe place is giuen to the Olive, in Latine Olea. Of all other Plants it requireth least trauaile and charges, where as the Wine requireth most: and though it beare not every yere, but every other yere, yet is he to be borne withall, because he asketh neither cost nor labour: and if you bestow any vpon him, he recompenseth it thoroughly, with the abundance of his fruite. And since there is so great profit and commoditie in this Tree, and that the uses of it are so many, and so needesfull, it is god reason to be diligent and carefull about it; he loueth

a ground neither too high, nor too low, but rather the side of a hill, such as is the most part of Italie and Spaine: so; in such ground the extreme heat of the sunne, is something mollified with the cold blasts of the winde: so; in Olive trees (as Plinie saith) the soyle and the clime is of great importance: it delighteth in a warme, and dry ayre; and therefore in Barbary, Sicil, Andalusia, sundry parts of Italie, specially Campania, it prospereth wonderfully: it liketh not too great heat, nor too much cold. And therefore in hot Countries, it ioyneth upon the North side of the hillies, and in cold, upon the South side. It is thought, that if it stand above thre score miles from the sea, that it either dyeth, or prowdeth not fruitfull. The best ground is the gravelly ground, having alost a little chalke mingled with sand: it is also good ground where the sand or granell is medled with rich mould: yea, the stiffe ground, if it be rich and lively, doth very well agree with this tree. Chalkie ground is utterly to be refusid, and watry and marsh ground worst of all. The like is a baccaine sand, and hungry sand: but you may set it well in Coine ground, where either the Wilding or Pasthelme hath growne: but betwixt the Dake and it there is great hatred: so; if the Dake groweth nere, it flyeth away, and shanketh towards the earth: and though you cut downe the Dake, yet the very rakes pousoneth and killeth the pore Olive. The like some affirme of the trees called Cerrus, & Esculus: so; where they be pulled up, if you set the Olive, he dieth: so doth it (as Plinie saith) if it chance to be bruised of the Goate. On the other side, betwixt the Olive & the Wine there is great friendship & loue: and it is said, that if you graffe the Olive upon the Vines, it will beare a fruite that shall be halfe Grapes, and halfe Olive, ralled Vuoles, an Olive-Grape. There are sundry waies of planting of Olives: some take the biggest branches from the Trees, and sawing off the youngest plants of two cubits in length, they set them orderly in the ground: some settis the whole Tree together: some againe cutting off the tops, and all the branches, set the stocke about the rising of the Starre Arcturus. Many make them Impy Gardens in good ground and mellow, such as is commonly the blacke mould: herein they set the young branches

braches the lowest, & the sayest, two or thre inches in thicknesse,
 & very ferteill, which they gather not from the body of the tree, but
 from the newest and latest boughes. These they cut into pretty
 stettes of a foot and a halfe in length, taking good heed that
 they hurt not the rinde, and paring the ends very smooth with a
 sharpe knife, and marking them with redde Oker, that they
 may know which way they stood afoore, and so setting the lowest
 part into the ground, & the highest towards thy heauen, they put
 them in the ground, and so they grow the faster, and beare the
 better: so if you shold set them with the lower end upward,
 they would eþer hardly grow, or proue unfruitfull: and ther-
 fore they haue a regard of the setting of them. You must beside,
 before you set them, rubbe ouer both the toppe and the stote with
 dung mingled with Ashes, and so set them depe in the ground,
 covering them soure fingers thicke with rotten mould. You
 may chuse whether you will set them all under the ground, or
 set some part within the ground, and suffer the rest to appeare
 above the ground: those that be sett all within the ground,
 neede not to be marked, but such as shall stand with one
 part above the ground. Dydimus would have them so
 set as they may appeare soure fingers above the ground, & then
 to make a little trench for the receyving of the water: and this
 manner of planting with the boughs, is of Dydimus best liked.
 Wher you meane to plant, you must purge the ground of all oþer
 plants, bushes and weedes: & the trenches must so be made,
 as with the winde, the sunne & raine, it may be mellowed, made
 crumbly, that the plants may the sooner take roote. If your
 busynesse require hast, you must a moneth or two before, burne
 in the trenches either sticks or reede, or such things as will easi-
 ly take fire: and this you must doe diuers dayes together. Your
 trenches must be thre cubits, or thereabout in depth, and 40.
 cubits asunder, wherby the trees may haue ayre enough: the
 first, second, and the third yere, the earth must be trimmed with
 often raking: the first two yeres you must not meddle with prop-
 ping: the third yere, you must leaue upon every one a couple of
 braches, & often take your Impegarden: the fourth yere, you shall
 of the two branches cut away the weaker; being thus ordered, in
 the fift yere they will be great to be remembred; the stocke that is
 as

as big as a mans arme, is best to be remov'd; let it stand but a little above the ground, so shall it prosper the better. Before you remov'e it, make the part that stood South with a piece of Wker, that you may set it in like maner againe. You must first dig the trenched ground with Hattocks, & after turne in stone, plow'd earth, and sow it with Barley: if there be any water standing in them, you must let it out, and cast in a few small stones, and so setting your Hettis, cast in a little dung. After the tenth of June, when the ground gapes with the heate of the Sun, you must take hede that the Sun pierce not through the clefts to the roote. From the entring of the Sun into Libra, you must ridde the rotes of all superfluous spryngs: and if the Tre's grow upon the edge of a hill, you must with littell gutters draw away the muddy water. The dung must be cast on at the fall of the lease, that being mingled in Winter with the mould, it may kepe the rotes of the tre's warme. The mother of Oyle must be powred upon the great ones, & the mosse must be cut off with an Iron Instrument, or else it will yeld you no fruit. Also after certaine yéars, you must cut and lopp your Olive tre's: so it is an old proverbe, That who so ploweth his Olive Garden, craveth fruit: who dungeth it, moueth fruit: who cutteth the tre's, forzeth fruit. In the Olive Tre' you shall sometime have one branch more gallant then his fellowes, which if you cut not away, you discourage all the rest. The Olive is also grafted in the wilde Olive, specially betwixt the rinde and the wood, and by implastring: others graffe it in the roote, and when it hath taken, they pull vp a parcell of the roote withall, and remov'e it as they doe other plants. Those Olives that haue the thickest barks are graffed in the barke. The time of Grafting them, is from the entring of the Sunne into Aries, and with some from the ris. of May, till the first of June. The time of gathering of Olives, is when the greater part oʒ halfe the fruit waneth black, and in faire weather: the riper the Olive is, the fatter will be the Oyle. In gathering of Olives, there is more cunning in making Oyle, then in making Wine: the lesser Olives serue for Oyle, the greater for meate. There is sundry sortes of Oyle made of an Olive: the first of all is raw, & pleasantest in taste: the first streme that comes from the preſſe is best, & so in order.

T H R A. Goe on then, and let vs heare what you can say of Apple trees: whose use is more commonly knowne unto vs.

M A R I V S. There are such sundry sorts of Apples, differing both in shape and saour, as are scarcely to be numbered.

We have at this day that are chiese in price, the Pippen, the Monet, the Pomeroyall, the Marigold, with a great number of others that were too long to speake of.

Apple trees are set either in Februarie, or in March or if the Countrey be hot and dry, in October and November. But all kindes of Apples doe better prosper by grafting, & inoculation, or imbudding, as I said before, about March or Aprill, or what time so ever the sap be in the rinde. They are also grafted by implastring, about the tenth of June: though some(as they say) haue had good successe in doing it after the entrance of the Sun into Aries, as I haue said before, where I speake of implastring and Grafting. The Apple is commonly Grafted upon the Crab Stocke, or upon the Bramble, being first planted, and the yere after cut off within a foote of the earth: upon this stocke you may Graft (as I said) the tender young Grassen of any Apples. Palladius saith, you may graffe the Apple upon the Perry, the Hawthorne, Plumb tree, Hertuisse tree, Peach, Plane tree, Poplart, Willow, and Peare: but in such difference of Countries, we can set downe no certaine order for them all; and therfore as farre as mine owne experiance, and the knowledge that I haue learned of others will stretch, I will gladly helpe you. There are that according to the olde order, doe graffe the Apple either upon a wilde Perry, or upon a Quince, wherof they haue a most excellent fruite, called of the olde writers Melimela. If you Graffe upon the Plane tree, you shall haue a red fruite: you may also well Graffe your Apple upon the Damson tree, and if you Graffe upon the Cytron, you shall haue them beate, as Diophanes saith, fruite almost all the yere long.

But aboue all to graft the Apple upon the Apple is the best, for the best Stocke ever bringeth forth the best fruite *.

The Apple lonch a fat, and a good ground, well wafted rather by nature, then by industrie. In mountaine Countries they must alwayes be set toward the South: if prospereth well enough, so it be something holpen with the Sunne, neither doe they

they refuse either rough or marshy grounds. A leane and a bar-
taine soyle bringeth out wormeaten, and falling fruit: the
noysome wormes are destroyed with Dogges dung, mingled
with mans brine, and pouzed upon the rootes. And if the tree
be very full of wormes, being scraped downe with a brasen
scraper, they never come againe, if the place whence you sca-
ped them, be cubbed ouer with Bullocks dung: some adde unto
brine Goates dung, and pouze upon the rootes the Lees of old
wine. The tree that is sick, or prospereth not, is holpen being
watered with Asse dung, & water sixe dayes: they must be often
watered at the setting of the Sunne, till the spryng be come
out. Pliny writeth, that the water wherein Lupines hath bene
sod pouzed upon the tree, doth the fruit good. They say, if the
tree be much watered with brine, the fruit will be red. Others
againe set under their trees Rose, thinking therby to have their
Apples red. Apple trees(as I said before) must be set every sort
by themselves, as Columella biddeþ, least the smal trees be hurt
of the great, because they be not all of one growth, or strength.
Beside, you must set them very thin, that they may have come
to shott out their branches: for if you set them thick, they will
neuer bear well, and therefore you must set them soþy, or at the
least thirty foot a sunder: The Apple declareth his ripenes by
the blacknes of his kernels.

For their gathering, you shall understand that the Sommer
fruit is first to be gathered, whose rypons you may partly know
by the change of the colour, partly by the pecking of Birds,
but cheily by the ky:nell: when they are ripe you shall rather
gather them with the hand then beate them downe with poles.
There be some that goe up into the tree, or have a tall ladder
with a backe stay, that the ladder may not hurt the ten-
der branches, and having a Basket with a long line fastened
thereunto, asone as it is filled, let it downe to be emptied gent-
ly into the greater vessells; & in this gathering you neede not re-
spect the state of the Sonne or such like ceremonies. But when
you come to gather your winter fruit which are Peppins, Pear-
mains, Russettings, the black Amas & such like, you shall in any
wise gather them in the wane of the Sonne & in a dry sea-
son, & if it be so that your lode be so great that you cannot gather
all

Against
hurtfull
wormes.

get time, eight or nine dayes; and being ordered in this wise they shal neither (they say) be rotten, or worme eaten.

There are divers and sundrie uses of timber: such as are barraine, are better then the scutfull, excepting those sorte where the male beareth, as the Cipresse, and the Cornell: in all trees the parts that grow toward the North are harder, and sterner, which are almost covered with molle, as with a cloake against the colde: the worst are those that grow in shadowie and watery places, the mawier and better duryng, are they that grow against the sunne: and therefore Theophrastus divideth all Timber into thre sorte, into cloven, squared, and round, of which the cloven do never rent nor coame: for the pith being bared, dieth up and dieth: they also endure long, because they haue little moysture. The squared, and the round, or the whole timber, both coame and gaps, specially the round, because it is fuller of pith, and therefore renteth and coameth in every place. And such high Trees as they use for pillars and maine postes, they first rub over with Walloches dung to season them, and to sucke out the sappe: for the moysture doth alwayes coame sooner then the dry, and dry better to be salone then the green, except the Oak, and the Bore, that doe more fill the teeth of the sawe, and resiste it. Some againe resule to be glued either with themselves, or any other, as the Oak, which cleaveth as soone to a stone, as any wood, neither doe they well cleave, but to such as are of like nature: to be boord, the graine is woxer then the dry: the light, and the dry, are harder to be cut: for Bandes and Withes, the Willow, the Browne, the Wych, the Elme, the Poplar, the Vine, the cloven Vide, & the Bramble are best: the Hasell will also serue, but the first is the Willow: they haue also a certayne hardness and sauerenesse, meete to be used in graven workes. Among those that serue for timber, are most in use the Firre, the Oak, the Pine, the Larish, the Celo, the Elme, Willow, Cedar, Cypressse, the Bor, Wych, Plane tree, Alder, Ashe, wilde Oak, Date tree, Beech, wilde Olive, Washolme, Walnutt, Maple, Holly, and divers others, used according to their nature, and The firre. The manner of the Countre where they grow. The firre tree,

trie, whereof I have spoken before, giveth out Rozen, and his Timber is meet for divers wokes, and greatly esteemed for his height & bignesse, whereof are made the Ship Pasts, & Pillers for houses: For it is very strong, & able to abide great force. It is used also in building, for great Gates, & Dore posts: in fine, good for any building within, but not so well enduring without doores & very soon set a fire. They used (as Theophrastus saith) in the olde time to make their Gallies & long Boates of Oke, for the lightnesse sake, & their Ships for burden, of Pine tree, & Oake. I have spoken a little before, the timber whereof is best, both for inward buildings, & for the weather, & also well enduring in the water: He sodus woulde have yokes make of Oke. The wilde Oke serveth also well in water wokes, so it bee not nare the sea: for there it endurath not, by reason of the saltnesse it will not be pierced with any Augur, except it be wet before: neither so will it suffer (as Pliny saith) any Naile driven in it, to be plucked out againe.

The Elmie is used for weather boards, and water-wokes to make plankis for low moist vaults, for Kytchin Tables or Butchers Stalls; for Naues of wheeles and Areltrees or any use of toughness. The Als (as Theophrastus saith) is of two sorte, the one tall, strong, white, and without knots, the other more full of Sap, ruggedder and harder.

It is the onely Timber of all other for Ploughes, for ordinarie Areltrees, the rounds of Wheeles, Harrow Bulls, Coaches and the like, also the Als, besides his manifold use other wayes, maketh the best and fairest hōsemens staves and Pikes, whereof was made the stasse of Achille, whiche Homer so greatly commendeth: it is also cut out in thynne boordes.

The Bæch, whereof I have spoken before, although it be brittle and tender, and may be so cut in thin boordes, and bent, as he seemeth to serue onely for Caskets, Boxes, and Coffers: his colour being very faise, yet is he sure and trustie in bearing of weight, as in Areltrees, for Carts or Maines. The barkie of the Bæch, was used in olde time for vessels togather Gapes in, and other scuite, and also for Cruets, and vessels to doe sacrifice withall: and therfore Curius sware, that he brought nothing away of all the spoile of his enemies, but one p^rce

The use
of the
Elme.

Vie of the
Als.

Bacchen Cruet, wherein he might sacrifice to his gods.

The Alder. The Alder is a tree with freight boode, a soft and reddish wood, growing commonly in the watry places; it is chiefly esteemed for foundations, and in water wokes, because it never rotteþ lying in the water: and therefore it is greatly accounted of among the Venetians, for the foundations of their palaces, & houses: for being driven thicke in piles, it endureth for ever, and sustaineþ a wonderfull weight. The rinde is pulled off in the Spring, and serueþ the Diar in his occupation: it hath like knots to the Cedar, to be cut and wrought in.

The Plane-tree. The Plane tree is but a stranger, and a new come to Italie, brought thither only for the commoditie of the shadow, keeping off the Sunne in Sommer, and letting it in, in Winter. There are some in Athens (as Pliny saith) whose branches are 36. cubits in breadth: in Lycya there is one for greatness like a house, the shadow place underneath containing 81. scote in bignesse: the timber with his softnesse hath his use but in water, as the Alder, but drier then the Elm, the Ashe, the Mulbery and the Cherry.

The Linder. The Linder Theophrastus counteth best for the workman, by reason of his softnesse: it breedeth no wormes, and hath betwixt the Barke and the Wood, sundry little rindes, wherof they were wont in Plinies time to make Ropes and Washes.

The Birch. The Birch is very beautifull and faire: the inner rinde of the tree, called in Latine Liber, was used in old time in sted of Paper to write upon, and was bound vp in volumes, whereof booke had first the name of Libri: the twigs & bowes be small, and bending used to be carried before the Magistrate among the Romanes, at this day terrible to p oxe boyes in Schooles.

The Elder. The Elder tree, doth of all other trees honest and easiliest grow, as experience teacheth vs, and though it bee very full of pith, yet the wood is strong and good: it is hollowed to divers uses, and very light staves are made of it. It is strong and tough when it is drye, and being laid in water, the rinde commeth off as stone as he is drye. The Elder wood is very hard and strong, and chievely used for Boare speares, the roote (as Plinic saith) may be made in thin boordes.

The Figtree. The Figtree is a tree very well knownen and fruitfull, not
very

very high, but somewhat thicke (as Theophrastus saith) a cubite in compasse, the Tymber is strong, and used for many purposes; and sith it is soft, and holdeth fast whatsoeuer stickes in it, it is greatly used in Targets.

Boxe tree, is an excellent Treæ, and for his long lasting, to bee preferred before others: it is of especiall use amongst Turners, Combe-makers, and Mathematicall Instrument makers.

Juniper driveth away vermine: for with his labour, **Toads** Juniper. and Snailes, and such like, are driven away: it is very like to Cedar, but that it is not so large, nor so high, though in many places it groweth to a great height: the Limber whereof well endureth a hundred years. And therefore Hannibal commanded that the Temple of Diana should be built with rafteres and beames of Juniper, to the end it might continue. It also keepeth fire a long time, in so much as it is said, the coales of Juniper kindled, have kept fire a yere together: the Gum whereof our Painters use.

The Cedar treæ, the hardnes of this timber is only praised, & that it will never rot, nor be worme eaten, but continue ever. **S**alomon built that noble Temple of God, at Ierusalem, of Cedar: It

is very meet for the building of Pallaces, Castles, the Cedar, the Eben, & the Olive treæ, do never chinke nor coame. Images of Gods & Saints were alwayes made of Cedar, because it ever yieldeth a moisture, as though it sweat. **T**heophrastus writeth of Cedars in Syria, of fourt elles & more in compasse. **T**he Cypresse, & **P**ine, do endure a long time without either worm or rotting. **P**liny commendeth Gates of 400. old. **T**he Pine (saith Theophrastus) is of a great strenght, & very meet for the straightnes & hand-somnesse, to bee employed in building. **T**he Walnut treæ is a great treæ, & commonly knowne, whose Limber is much used in **fe**elings, & tables. **T**heophrastus writeth, that the Walnut treæ before it falleth, maketh a certaine kinde of noys, which it once happened in Antandro, the people being greatly afraid, fled so dainly out of the Bathes. **T**he wild Olive, of his wood is made **Olives**, & hafts & handels of wimbles & augurs. **H**eome, or Holly, is a treæ **The Holly**, whose leaues are full of prickles, round about the leafe, and the batke, being both continually græne, the berries like the Cedar:

206 The second Booke, entreating

of the rinde and rootes they make Birdlime: the wood is very hard, the branches will well winde and bole, and therefore serveth excellent well for quickset hedges.

The Maple The Maple, for the beautie of the wood is next to the Cedar, having a very faire and pleasant graine, of the resemblance called Peacockes taile: with this wood Tables are covered most gorgeous to the eyes, and other fine workes made.

The Date tree. The Date tree, whereof we have spoken before, hath a very soft wood.

The Cork. The Cork, his timber is tough. If you will chuse Timber for stoles, Chayres, Chests, Desks and the like, then you shall chuse the best Pearre tree, for it is most smooth, sweete and delicate, and though it be a very soft wood, yet in any of these frames it is an exceeding long laster and the heart thereof will never haue worme, nor will it in any time lose the colour.

Use of the Maple, Beech and poplar. If you will chuse Timber for Trenchers, Dishes, Bowles, Trays or any Turners ware, or for any Inlaying worke, you shall then make choyce of the fairest and soundest Maple being smooth and unknotted, for it is the plainest graine & the whitest of all other; and although either the Beech or the Poplar will reasonably wel serue for these purposes, yet the Maple is chiesely to be preferred: for fire, and light, are used the Firre, the Pitch tree, and the Pine.

For Coals. The best coales are made of the fallest wood, and the Oak, and the wilde Oak: but the finers rather desire the coales that are made of Pine tree, because they better abide the blowing, and die not so fast as the other. The Cete tree, though the Timber be of no great use, yet serueth it well to make Coale of for the Brasse Forges, because as soone as the Hellowes leaves, the fire casteth, and there is little wark in it: but for building, the Timber thereof is altogether unprofitable, because it doth easily breake, and moulder away: but being in postes unhewed, it serueth well enough within doore. The aptest to take fire, is the Fig tree, and the Olive tree. The Fig tree because it is soft and open: the Olive tree, for the fassnesse and the fatnesse. The Larch tree (as Virruvius saith) resisteth the fire, though Mathiolus (as I said before) goeth about to disprove it.

This

This is the opinion of the Ancients, but we finde by experience, that Dake, Elme and Alde make your longest and best inducing Coales. The Birch the finest and brightest Coale, and the Birch o' Hallow the swiftest burning Coale. Now soz your small Coale, the twigges of the Birch makes that which kindles soonest, and the white thorne that which induces the longest; and the roots and hard knots of any before spoken of, makes the best Wandz*. In all the bodies of trees, as of lively creatures, there is skin, sinewes, blood, flesh, veines, bones, & marrow: their skin is their bark, of great use among Country people: the vessels that they gather their Vines, & other fruits in, they make of the batke of Linde tree, Firre, Willow, Birch, & Alder. The Cork hath the thickest bark, which though he lose, he dieth not, so; so beneficall hath nature bene to him, that because he is commonly spoiled of his bark, he hath given him two barkes. Of his bark, are made Pantosles & Slippers, & floates for fishing Nets, & Angles: if the bark be pulled off, the wood sinkes: but the bark alwayes swimmeth. The next to the rinde in most trees, is the fat, the softest and the worst part of the tree, and most subject to wormes: therefore it is commonly cut away. The sappe of the tree, is the blod, which is not alike in all trees, soz in the Figge tree it is milkie, which serveth as a Kennet for Chese. In Cherrie trees, it is gummy: in Elmes, saltish: in Apple trees, clammie and fat: in Vines, and Peare trees watrish: they commonly spring the best, whose sappe is clammy. The juice of the Mulberie, is sought for (as Plinie saith) of the Phisitians. Next to the fat, is the flesh, and next to that the bone, the best part of the timber: all trees have not any great quantitie of this fat and flesh, soz the Bore, the Cornell, and the Olive, have neither fat, nor flesh, nor marrow, and very little blod: as neither the Herbisse, and Alder, have any bone, but both of them full of marrow. Redes soz the most part have no flesh at all: in flesh of trees, there are both veines and arteries, the veines are broader, and fairer: the arteries, are only in such trees as will cleave, by meanes of which arteries it commeth to passe, that the one end of a long beame laid to your eare, if you do but fillip with your finger upon the other end, the sound is brought soorthwith to your eare, whereby it is knowne, whether

ther the peece be straight and even or not. In some trees there are knots on the outside, as the wenne, or the kernell in the flesh of man, in the which there is neither veine, nor arterie, a hard knop of flesh being clong, and roll'd up in it selfe : these are most of price in the Cedar, and the Maple. In some, the flesh is quite without veines, having only certaine small strings, and such are thought to cleave best : others, that have not their strings, or arteries, will rather breake then cleave : as the Wine, and the Olive, will rather breake then cleave. The whole body of the Fig is fleshy : as the body of the Pastholme, the Cornell, the Willoe Oak, the Sulbury, and such others as have no pith, is all bony. The graine that runneth overthwart in the Beech, was (as Pliny saith) in the old time for his arteries.

T H R A. There are other commodities beside the timber to be gathered of these trees.

M A R I V S. Very true : (for as I said before) of the Medlar, the Oke, the Chestnut, the Pine, and the Beech, these trees that grow in the Woods, besides their timber, beare fruit also good and meate to be eaten. So of the Firs, the Pitch trees, and the Pines, we gather Rozen and Pitch, to our great commoditie & gaine : as of the Oke, the Beech, the Chestnut, the Medlar, and the Pine, we have fruite both meet for man, and also good for feeding of Hogs, and other Cattle. In time of death, both our forefathers, and we, have tried the god seruice that Acornes in bread hath done, yea, as Pliny & others have written, they were wont to be serued in amongst fruit at mens tables. Neither is it unknowne what great gaines some countries get by Acornes Rozen and Pitch : The Gall also groweth upon these Acorn-bearing Trees, whereof I have spoken before. Amongst all the trees out of which runneth Rozen, the Tarte tree, a kinde of Pine, is fullest of sap, and softer then the Pitch, both meet for fire, and light, whose boordes we use to burne in sted of candels. The Cedar sweateth out Rozen and Pitch, called Cedria. Moreover, of Trees, is Birdlime made, the best of the Cerre tree, the Pastholme, and the Chestnut, specially in the Woods about Sene, and neare the sea side, where they are carefully planted in great plentie, by the Birdlime-makers : For they gather the berries from the trees, and boyle them til they break,

and

and after they have stamped them, they wash them in water, till all the flesh fall away. Pliny affirmeþ, that it groweth only upon Dkes, Daſholme, Skaddes, Pine trees, and Firre. Birds lime is also made of the rotes of certayne Trees, specially of the Holly, whose rotes and barkes withall they gather, and lay them up in trenches, coveted with leaves in a very moyst ground (some doe it in dung) and there they let them lie till they rot, then take they them out, and beate them, till they ware clamrie, and after wash them in warme water, & make them up in balles with their hands: it is used (beside other purposes) for the taking of Birds. Besides all this, there sweateth out of Trees a certayne Cumme knowne to all men, as of the Cherry tree, the Plumme tree, the Juniper, the Olive, the Blachthorne, the Iuie, and Almond. Out of the Juniper, commeth verniſh: Verniſh, out of the Pirche, Slozor: out of the white Poplар, Amber. Amber, Plinius wriþeth, that Amber commeth out of certayne Pine trees in the ſat, as a Cumme doth from the Cherrie tree. And thus theſe things that I have heare at your request declared, touching the order of Planting and ſowing, I beſtech you take in god worth.

Soli Deo laus & gloria, per
Chrifum Iesum;

The end of the ſecond Book.



The third Booke:

Of Feeding, Breeding, and Curing. of CATTELL.

HIPOCONVS. EUPHORBVS. HEDIO. EVMAEV S.

Dat the breeding and feeding of Cattell is a part of Husbandry, and neare joyned in kindred to the tillure of the ground, not only appeareth by Virgill, the Prince of Poets, who hath in his Georgickes throughly set forth the order therof, but also by the witnessse of the more ancient Philosophers, Xenophon, and Aristotle. The like doth our common experiance at home daily teach us: for albeit the trade of Village and keeping of Cattell is divers, and the manner of occupying many times contrary the one to the other: as where the Craster & Wreder, requireth a ground full of Grasse and Pasture, the Husbandman on the other side, a ground without Grasse, & well tilled: yet in these their divers deuises, there appeareth a certayne fellowship and mutuall comoditie redounding in their occupying of one the other, which Fundavius in Varro, doth sheme by an apt comparison to proveras in a couple of Shalmes, or Recorders, saith he, the one differeth in sound from the other, though the musike and song be all one (the one sounding the Treble, the other the Base) in like manner may we terms the Crasters trade the treble, and the tillers occupation

occupation the base, following Dicæarchus, who reporteth, that at the beginning, men lived onely by herding and feeding of Cattell, not having as yet the skill of plowing and tilling the ground, nor planting of trees. Afterwards in the lower degree, was found out the manner of tilling of the ground, and therefore beareth the base to the fader, in that it is lower; as in a couple of Necosbers, the base to the treble. Both his using to have
cattell for plowing, cartage, dunging of our ground and other commodities: and on the other side, to till the ground for feeding and maintenance of our cattell, it comes to yalle, that though the number of occupying in tillage, and keeping of cattell be divers, yet one of them is fleshe, the other of the bone, that as it fliemeth, they cannot well be a hinder: for without the service of Horse and Drau, we can neither plow nor dung our ground. Chasse, Strake, and other offall of coone is rather to be spent upon the ground, then to be sold, both for the Gauners behoife, and the Lords, and better belloved upon the household cattell, then upon the foresters. Besides, the dung of the cattell enricheth the ground, and bringeth great increase: and whereas there is no place (as Columella saith) but in the tillage of the ground, they have as much need of cattell, as men: the cattell serve not only for tilling of the ground, but also to dung in chases, to leave bouldens, carrying dung to the gardens, also for draies and increas of the Woods: whereby they have their name Lumetts, or helpings, because they help and further us either in our labours, by plowing or bearing: but they do only such denc to manerly and bring up the name of good farral called Inuincia, but also the other lands lost of Wexford, as Shape, Wivine, Coates, and of joholes, Ward, Portrocks, Dutcher, Wigmore, Denries, Chickling, and other manors, and things belonging to Wexford: whereunto the said Wexford bring his vniuersitie wherof great gains: and they remoued so: it, there ariseth oftentimes as great profit, as in holding of Coone, and that with smaller charges. For a pence that feeding is gainfull, the words Pocula, moneys and Peculium, the same, especially being took out of the Latin name of cattell, may very well serue: by in the old time the pence and cattell in handes of money, and they comynge penitent a shillings taken.

Sene, for the Dropple with Spurge, or Agaricke: for clensing of the
 bloud, with Fumitory, or Hoppes: and if you will but onely lose
 the belly, with Mercury, or Hallowes: so faire Cardanor. Our
 coutrymen doe chiefly command for milke, the Pastures
 where groweth Sperty, and Claver-grasse, & that is all bedeckt
 with yellow flowers. For the Cattell, the difference is betwixt
 the sicke and the healthie, the young, and the olde: and for the
 milke, that is best that is not long kept after the milking, nor
 that is milked immediately upon the Calving, a grosse un-
 wholesome kinde of Milke. To trie whether Milke be mingled
 or not, you shall take a sharpe Rush, & putting it into the Milke,
 let it drop from thence upon your Haile, and if the drop runne
 abroad, it is a signe there is water in it: if it haue together, it
 shewes it to be pure and good. Of Milke is made Butter, whose
 use (though it be chiefly at this day among the Flemings) is
 yet a good and p[er]nitable fode in other Countries, and much
 used of our olde Fathers, yea even of the very Patriarches (as
 the Scriptures witnesseth.) The commoditie thereof, besides
 many other, is the allwaging of hunger, and the preseruing of
 strength: it is made in this sort. The Milke, as soon as it is
 milked, is put out of the Haile into Bowles, or Pannes, the
 best are earthen Pannes, and those rather broad then depe: this
 done, the second, or the third day, the creame that swimmeth a-
 bove is floated off, & put into a vessell rather depe then big, round
 and Cilinder fashione: although in some places, they have other
 kinde of Charnies, low and flat, wherein with often beating &
 moving up and downe, they so shake the Milke, as they seuer the
 thinnest part off from the thicke, which at the first, gathers to-
 gether in little crombles, and after with the continuance of the
 violent moving, commeth to a whole wedge, or cake: thus it is
 taken out, and either eaten fresh, or barrelled with salt. The
 Buttermilke that remaineth of the Butter, is either kept for
 the family, or given to Calves and Doggs, as a dainty fode.
 Cheese is also made of the Milke of Cattell, the Milke being
 poured into a Messel of earth, putting into it a little rennet, the
 quantity of a Walnut, in a great vessell of Milke, whereby it
 tunneth into Curds. Varro doth better like the Rennet of the
 Leuet, or the Kid, then the Lambes: howbeit we commonly

Butter.

Cheese.

us

use the Calves Kennet : others use sundrie other meanes, onely with heate, warming it in Tinne vessells, and after dipping those Vessells in cold water, which is the sweetest and cleanliest manner : others put in the sieue of wilde Saffron, and being so turned, the Whey doth greatly purge cleame : others againe use the Milke of the Fig tree, and then doth the Whey purge both choler and cleame : some purge it with Drimell, or syrope of Vineger, which is of all other wayes the wholesomest : some besides, use the little skinne of Birds Guisards, and others, the floweres of wilde Thistles, or Hartichokes. The newer and better the Milke is, the better will be the Chese : for made of two sorts of Milke, or Milke that is too neare slated, it sone soureth, and wareth hard and naught, and is not to endure any while. Againe, being made of fat and new Milke, it will very long endure, and long continueth in his satnesse and softnesse : about a two or thre hours after you have put in your Kennet, the Milke commeth to a Curd, which is straight wayes put into formes, or Chesesats, and pressed : or if they be but small, they are onely pressed with the hand. If they be of any quantity, they have great waight upon them: it is very needfull you presse out the Whey with as much spide as you can, and to sever it from the Curd, and not to let it lye slowly drayning of it selfe. Those that make great Cheses, have moulds for the purpose, and Waightes and Presses assavable. After this, they take them out of the Presse, and lay them upon Herdels, or faire smooth Tables, in a shadowie and a cold place, and close from all windes, sprinceling them all over with salt, that they may sweat out all their sourenesse, laying them so, as they touch not one the other. When they be now well hardned and thickned, they are taken up, and pressed againe, with great weights, and cubbed over with parched salt, and after layd in presse againe, whereby it is thought they will neither have eyes, nor be over dye: which faults hapneth to come when they be either not well pressed, or too much salted. Some use to put into the bottome of these Pailes, the gréene kernels of the Wine Apple, and milking into them, doe cause it so to turne. You may also cause your Chese to relish of whatsoeuer you will, as Pepper & any other Spice : but Columella counts that for the best Chese,

Cheese, that hath least mixture in it. The Strongest Cheese, and hardest of digestion, are those that are made of Buttles milke: the next are such as are made of the milke of Ewes, but the mildest, and lightest of digestion, are those that are made of Goates milke: the Cheese that is made of Goates milke, is of the same qualitie that the Buttles Cheese is. There is Cheese also made of Cammels milke, and of Asses milke: the Cheeses that are made of Buttles milke, are at Rome, of all other cattell in greatest estimation. Such as are touched both above and beneath, and have more then soure Pappes, you can make no Cheese of their milke, for it will never Curd. In our daies, the best Cheeses are counted the Parmasines, made about the River of Po, esteemed so; their greatnessse, and daintiness, of which you shall have brought into other countries that weigh above threescore pound. Next are commended the Holland Cheese, the Cheese of Normandie, and the English Cheese. In England the best Cheese is the Cheshire, and the Shropshire, then the Banbury Cheese, next the Suffolke, and the Essex Cheese, and the very worst the Kentish Cheese.

15 Of the whey which commeth from the Cheese is made certayne Curds which are called Whey Curds, & are made in this manner. They put the Whey into a Brasse Kettle or Pan and set it over a soft fire, heating it till the fatnesse of the Cheese swimme aloft, then with a Dish they put new milke into the Whey, and presentlie you shall see the Curds swim aloft upon the Whey; which with a Skimmer you shall take and put into a cleane vessell, and so doe as long as you see the Curds arise, then when they cease, put in more new Milke and more Curds will arise, and thus do till the strength of the Whey be spent*. The old writers do teach the making of a kinde of white meat, not much unlike to Cheercards, which they called Melcan, & made it in this sort. They put into a new earthen vessell Vineger, and suffer'd it to boyle softly upon the fire, till the vessell had drawne up the Vineger, and into that vessell they poured in Milke, and set it where it might stand stedfast, whereby they had within a while their desire. But me thinketh I have spoken enough of this subject, I wil now proced to the nature & ordering of Swine which that it is a notable Creature belonging to husbandry, doth evide ently

Melcan,

Swine.

evidently appear by the saying of h̄ ancient husbandes, counting him a slothfull & an unthrifte husband, that hath his Bacon rather from the Butcher, then fro his own Rose: soz there ariseth as great profit many times to us of our own Swine, as doth to you that be keperes of greatest cattel of your flocks: soz if Bacon be away, the chieffest suppoſter of the Husbandmans kitchin is wanting. And where as Swines flesh someth abominable to h̄ scrofule Jewes, I believe verily they neuer tasted the Gamonds of France, so highly commended by Varro, Strabo, Atheneus and other learned writers: which I suppose were none other but the hitches of Mespaly, so greatly esteemed at this day, not onely in Germany, but in Rome, & that they were called by the names of Celtick Gamōs, because the old writers, especially h̄ Greeks called all Countries on this ſide the Alpes, both French and Dutch, by the name of Celtick, durely there is no beall besides that makes more dainty diſhes, there is in him māre ſiticke diſſerent taſtes, where every other beaſt hath but one, & herof came at the firſt the ſharpe law of the Censoris, forbidding it to be uſed at ſuppers, the Widders, the Stones, the Tripes, and the forepart of the heads of Swine, (as Plinic witnesseth.) And moſt apparant it is, that not onely the French, & the Dutch in thofe daies, but also the Italiāns, and the Greeks, nourished great heards of Swine. Among the Greeks, Homer maketh mention of one, that had twelve Hogſyes, every ſye containing ſiticke Porklings, & Polybius writeth, of moſe then a thouſand to be ready at a time among the ancient Italiāns, Luskians, & French. Varro accounteth a hundred but a ſmal heard. Whoſo will nourish hogs, muſt have regard both to the ſartenelle, & the age. Varro addeth beside the nature, the kinde & the country. And because the yong do comonly reſemblē their parents, he would haue you chooſe ſuch as are faire, & large bodied, and which makes moſt to the matter, as fruitfull as may be: which Varro, doth chieffely commend thoſe that be of one colour, their bristles would be thickes & blacke, if it be in a cold countrey: if in a temperate, you may nourish the ſmooth. Their proportion would be long, large-sided, & bellied, wide buttocked, ſhort legged, & footeſt, big necked, & iuel brayned, ſhort groined, & turning upward, his taile wrinkled. The kinde is moſt commended, that bringeth many Pigs, the country that

heweth large and great: the best age for the Boare, is a yere old, though at halfe a yere old they are able to serue a boare: one Boare is enough for ten boves, & more. The boar is sufficient to bying Pigs at a yere old, & so for seuer yere after; the swiftest he is, the swifter he warereth old: at the first farrowing, you shall easilly see what number he will bring forth: he will not much differ in the other. The best kinde of boves have twelue pappes, the common sort ten, or not so many. Every pigge doth know his own way that he was borne too, and sucketh only that, & none other: if you take away the pig, the way dieth, as both Plinicke, & experience sheweth. They were wont to be bought and bargained for in this sort. Doe you warrant that these bovines are sound, that I shall well enjoy them, that you will answer the faults, & that they be of a healthy breed? A wet marshy ground, is meetest for this Cattell, for he delighteth not in water, but in durt and myre, so much (as Varro writeth,) that the bole, as soone as he hath caught a bove, draggeth her to the water, because his teeth are not able to abide the heat of her flesh. And although this beast will away with any ground, (for he feedeth both in mountaines, championes, & marshes,) yet his chiefe delight is in the woods that is full of quagmires, where there groweth Rose of Wye, Corkie, Beech, Mastholme, wilde Olives, wilde Dates, Haselnuts, Crab trees, Plome trees, and Cherie trees: for these beare scut at divers times, and feede the heards almost all the whole yere. Whereof a marsh is to be preferred before a dry ground, that they may moule in the marsh, dig up wormes, wallow in the myre, & tumble in the puddles of water, which in summer is most medfull. They also hunt after rootes, specially Ferne rootes, & the rootes of Bulrushes, Rushes, & Hedges, beside good grasse wel feedeth a bovine, & orchards of Cherries, Plums, Apples, & Nuts: & notwithstanding all this, the Barne, for you must feede them often by hand, when meate fayles abroad: and therefore you must preserue store of Acornes, in Costomes in the water, or dyed upon smoky stoves; also Beanes, Pease, & Lares must be given them, and not so much as Barley spared: for this kinde of feeding doth make them faire, and not onely fests them but giveth the flesh a pleasant taste. Also the Dayrie and the Milchhouse affordeth unto holding bovine good store of food, as from

from the first, vixay, Buttermilk, washings of Chese-sats and milkebolles with other swillings; from the other, Craines and drasse, washings of Hogheads, Tunnes and Brewing bessell, Mann, Chysell and such like*.

When they are yet yong, & sucke, both they & their Dams must be well fed, they must be put to fide early in the morning, afore the heat of the sun, & after kept in shadowy places, where there is god store of water. Asoze they go to pasture, they must be medycined, lest the grasse scower them too much, by which they will be greatly weakened. In Winter they must not be put abroad, till the frost be off the ground, and the Ice thawed. And though the Swine wil runne at the knowne voyce of the Swine-heard, yet Varro will have them brought both to pasture, and homeward, with the sound of a horne: their meate must be given them scattered thin, so shall both lesse suffice, & the greater shall not harme the smaller: as swine as they heare the Horns, shongh they be never so far off in the Woods, they come running with al hast. Polybius telleth, that the Italians use not to folloin their heards, as the Greeks and others doe, but going a prettie way beso; them, they blow their hornes, their heards being acquaintid with the blast, no follow them in great oder. They do so wel know and obey the call of the Swineheard (if we may beleane Alianus,) that when certaine Rovers, landing upon the Coast of Tuscan, and taking great numbers of them out of their Idies, carried them aboard, the theedes having weighed up their Ankter and being under sayle, the Swine upon the hearing of their keepers voice, suddenly ran to the one side of the ship, & obstructed her, wherby (the Pirates drowned,) the Swine came safe to land to their Masters. As I have here told you of the conditions of the Boare and the Sow, and of their keeping; so will I now shew you the manner of their breeding: The Breeding time is reckoned to be from Winter, till the twelvth of March, so shall you have them to farrow in Summer: for the Sow going soure Moneths with Pigge, farcoweth in the fist. Wher is with Pigge at the fist breeding, but they use to let them goo often to Boare, because, they sone miscarry: if you will have two farrowes in one piece, you must put your Sow to Boare in Februarie, or Januarie, that she may farrow in Apill or May,

A wonder
full knowl-
ledge in
Swine.

when as there is god pasture abroad, and spylke is in his chiefe strength: & when they be weaned, they may wel sive upō straw, & grottens: & after, the Holm may farrow again in the end of Autumne: soz Varro saith, her farrowing times are so diuided soz the nonce, as she may farrow twise a yere, while she hath fourte moneths to beare them, & two to sive them. As soone as they be with pigge, you must keepe the Woate from them: soz with his iuruliuesse, he maketh them to cast. Yong Swine soz bide, must not be lesse then a yere old, as Varro would have it: holwe it they begin at eight moneths, and continue seuen yeres. The Woare beginneth at eight moneths, or sixe, and continueth well fourte yeres, and after, at thre or four yeres old you may geld them, and sat them. Some would not have you keepe up above eight, others not above sixe: not that the Holm is able to keepe no more, but that she that keepe more, soone sayleth. Varro reporteth, that the Holes of Aeneas Lavinus, satered at one time thirtie white Piggis: but it is monstrous when she farroweth more then she hath paps. Every Holme must have her. Stie by her selfe when she hath farrowed, and not sufferer to goe with the whole Heard, as other cattell are, but little Cotes to be made for them, wherein they may be kept either farrowing, or with farrow: soz Swine, if they lye together in any number, being commonly ill mannered, doelye one upon another, whereby they hurt such as are with pig. And therefore you must have severall Holes where they may farrow, & made high, that the Holm cannot get out: soz covered they must not be by any meanes, that the Swineheard may looke that the Holm overlay none of them, & to see what they want, that he may make them cleane, and as oft as he cleasneth it, he must strew sand, or such like, to drye up the moysture: soz though she be but a stouish creature, yet loveth she to have her chamber cleane. When she hath farrowed, she requireth greater quantitie of meate, whereby she may give the more milk, specially Barley steeped in water, or ground, & tempered with water. And if you have not god store of meate, your best is to sell the Piggis: so shall the Dam, being deliuered of her burden, be sownet with farrow again. Such as are farrowed in Winter, are comonly poore & wretched, both because of the cold, & that their Dams do not like them soz wan-

ting

ting of milk, & biting their Pappa. If the Hōwēe eate her Pigs it is no wōder: for Swine of all other beasts, can worke away with hunger, which when it provoketh, they eate not only their owne, but yong children, which not long since happened in Souther, to the pittifull discōfort of the Parent. They suffer not the Hōwēe to eaten by a go abroad in ten dayes after her farrowing, except it be to drinck; after, they suffer her to goe about the house, that she may the better give milke. Whēn the pigs ware great, they desire to go abroad with their Damis, at whch time they are led by themselves apart, to the end they may the sooner forget their mother, which they will do in ten daies. It behoveth hō Swineheard to be careful and diligent about his charge, that he have in memory every one of them, both old & yong, that he consider every farrow, & shut up thase that be great with pig, & they may farrow in their stye. He must haue special regard of every yong pig, that every one of them be brought up under his owne dam: so, if they get out of the sty, they straightwaires mingle one cōpany with another, whereby the pore Hōwe is forced to give milke many times to more pigs then her owne: therefore hō Swineheard must shut up every dam with her owne pigs. And if his memory serue not to know them all, let him pitch every Hōwēe and her pigs with a severall marke: so in a great number it shal behove him so to do, for confounding his memory. The old husbands obserued alwaies two times in the yere, for cutting of them, hō Sprīng & the fall of the leafe, wherby they avoided the dāger both of the heat & cold. The Boare pigs they cut when they were six Moneths old & again at fourte yere old, to make them fat, making two wounds, & taking out the stōne of ebery side: or else when you haue taken out one stōne, you must thrust your knife again into the wound, and cutting a sūnder the skinne betwixt the stōnes, draw out with your fingers the other, so shall you make but one scarre: but this kinde of cutting is somewhat more dangerous. The Hōwe are spaid by burning the Matrix with an Iron, and the scarre healed up, wherby they will both haue no more pigs, and be the fatter. Aristotle, and following him Plinic, would haue the Hōwēe after two dayes fastynge, hanged up by the soare legges, and so cut, wherby he will be the sooner fat: but I judge it better to cut them when they be yong, at two Moneths old, or younger, for

so are they in least jeopardie. After they be cut, you must keepe them from drinke, and give them but little meate: the wound must be annoynted with fresh Butter, and sowed up. As the wrinkling and turning up of the lalle is a signe of a sound Hog, so be there certaine and assured signes of their sicknesse: so; if you plucke off the bristles from the backe, and finde that their rutes have bloud in them, it shewes the Swine is not wel. Besides, if your Hoggges be sickle, or taken with a Fever, they hang their heads at one side, and suddenly as they runne abroad, they stay, and being taken with a turning giddiness they fall downe: & therefore you must marke well on which side they hang their heads, that you may cut the eare of the contrarie side to let them bloud: and under the tayle beside, two inches from the rumpe, you shall strike the veine, which there is easly to be seene, by the bignesse of it: you must first beate it with a little sticke, and after it swelleth with the beating, open it with your knise, and having bled suffiently, binde it up with the rind of Willow or Elme: after this, keepe them up in the house a day or two, and give them warme water, with a good quantite of Barley-flowre. If the Quissey or Vuuls, (to which disease this beast is wonderous subiect) chance to take them, Didymus would have you let them bloud behinde aboue the sholders, others under their tongue: some againe cure them with setting. If the kernells swell in the throat, you must let them bloud under the tongue, & when they haue bled, rub their mouthes within with salt, ffrely beaten, and wheate flowre: Democritus would have you give to every Howe, thre pound waight of the beaten rute of Daffavill. If they vomit, and loath their meate, it is good to give them before they goe abroad, the shavings of Ibozie, frysed with salt, and ground Beanes. Swine while they seeke abroad, by reason of their great denouring (so; it is an unsatiable beast) doe wonderously labour with the abundance of the Spilene: so remedie whereof, you shall give them water as oft as they thick, in Troughe made of Lamatice, the syre of which wood is very holesome for them. Democritus teacheth to give unto Hoggges that haue the Spilene, the water wherin the Coales of Heath hath bene quenched. This beast hath sometime a sicknesse wherein he pines away, and forsaketh his meate: and

Of diseases
in Swine,
and the
cure.

The Quin-
sey.

Kernells.

Vomit.

Spilene.

Choler.

if you bring him to the field, he suddenly falleth downe, and lyeth as it were in a dead sleepe: which as soone as you perceiue, you shall shut up the whole Heard in some house, and make them to fast one day, both from water and meate: the next day, the roote of the wilde Cucumber stamped, and strained with water, is given them to drinke: which as soone as they have taken, they fall a vomiting, and so purge themselves. When they have thus expelled their choler, you shall give them hard Beanes, strained with Wine. An excellent medicine against all Pestilence of Pestilence. Swine, doth Hieronimus Tragus teach, which is, when you see them infected, to give them the Roots of Polipodi, or Oke Ferne boyled in Wine, whereby they shall purge whatsoever is evill from them, and most of all choler, wherewith Swine are most troubled. Whereas thrist in Sommer is hurtfull and dangerous to all kinde of Cattel, to this beast it is most hurtful: and therefore you must not water them as you doe Sheape and Goates, but twice, or thrise a day: but if you can, you must keepe them by the water side, that they may goe thereto at pleasure: for the Swine is not content with drinking, but bee must often coule & plunge his filthy paunch in the water, neither delighteth he in any thing so much, as to wallow in the durt. And if you have no such place neare, you must draw some water from the well, and give it them in Troughs abundantly: for except they drinke their fill, they will fall sicke of the Lungs: which disease is cured (as Colomella witnesseth) by thrusting the roote of Helleborus through their eares: Pliny affirmeth the Rose to be a present remedie for the sickenesse of Swine. Some say, that if a Swine lose one of her eyes, she dyeth soone after: otherwise she liveth fiftene yeres. There is a kinde of disease amongst Swine (though otherwise they be healthie and fat) wherein their flesh is all infected with little graines, as big as peason: the Greckes call them Galazos, and live at this day Mezzled Swine, which you shall soone perceive by the sight of the tongue, and the hoarsenesse of their boyce: this disease they say, is naturall unto them, from which you shall preserve them, if you layle certaine plates of Lead in the bottome of their Trough. You shall also keepe them from this disease, if you giue them to drinke the Roote of Bryony: the generall and common remedy

remedy is Allome, Bzimstone, and Bay-berries, of each a like: adde thereunto a handfull of Sarte, beate them all together, and put them in a Bagge, which Wagge you shall cast into their water when they drinke, and renew it twice in the yere.


Hidden
sicknesse.

If you finde in your Swyne any sodaine or hidden sicknesse, the onely generall, most certaine & usuall helpe for the same, is first to let him blood under his tayle, and under his eares, and if they bleed not freshly enough, you shall beate them with a small sticke, and that will bring forth the bloud; then wazp about the sozes the barke of a young Osier, and then keepe him warme and give him to drinke warme Salver, well mixt with Barley-meale and Red-saker in powder.

The Gall.

The Gall is a disease amongst Swyne, because that choler is powertull in them, which you shall know by a swelling which will arise under their lawes: & the Cure is to stamp Colworte and Hasscon, and mixt it with Honey and water, and then straining it give it the Swyne to drinke by a pinte at a time.

The sleeping
evill.

Swyne are much subject to the Holdepingevill in the Sommer-time, & you shall know it by their continual sleeping & neglecting their meate. The Cure is to house them up, and keepe them fasting fourre and twentie houres, then in the Morning when hunger pincheth them, to give them to drinke swyllings warme, in which is stampyd god store of Stonecopp, which assone as he hath drunkne he will vomit and cast, and it is a present remedy.

The Poze.

The Poze is an infectious disease in Swyne, and proceedeth from corrupt blood engendred by porcetie, wet lying, Lousinesse and such like, and the Swyne can never prosper which hath them. The Cure is to give him first to drinke two spoonfuls of Treacle, in a pint of Honeyed water, which will expell the infection outwardly, then to anoynt the sores, with Bzimstone and Boares greasse, boyled together & to separate the sick from the sound*. Touching the feeding of Swyne, you shal easily (though wadds be wanting) fide Barnes, Marches, and Cōne fields to fide Swyne in. They will be fat (as Plini supposeth) in thre-score dayes specially if they be kept from meat thre daies before you fide them: they are fattid with Barley, Dates, or other Cereals, or Pulse, either given whole, or ground, but of all others,

Feeding
Swyne.

best with Haste : and that flesh is better, and of more substance that is fed with Acoynes, then that which is fatted with either Beech mast, or Chestnut. His beast will in time be so fat, as he will be able neither to goe, nor stand. *See* Varrō tells that there was lame in Arcadia a Sow so fat, that she was not only unable to rise, but suffred a House to make a nest in her body, and to lay her young there. The same Varrō reporteth, that there was sent to Volumnius a Senator in Rome, a piece of Booke of two tibbs that weighed thre and twenty pound : the thicknesse of which to owe from the skinne to the tibbe, was one foote and thre inches. Your best is to put to fatten your Swine of two or three yeres old : for if they be younger, their growing will hinder their feeding.

These are the opinions of the Ancients, but to come to the true and perfect order of feeding of Swine, it must be according to the Country wherein you live, as if you live in the Country feeding, which is W^edie, & where no. e of Haste is, then the mast is a sufficient feeding, and will make them fat in sixe or seven weekes : then having got flesh and saltnesse bring them home and so ten dayes o^r a fortnight, feede them with dry Pease or Beanes, and plentie of water, and it will so harden their flesh and fat that it will not consume when it comes to boylng.

If you live in a champaigne Countrey which is farre strom w^{ds}, then dry up your fattenings & let them not rawdge abroad but have their foode & water brought unto them till they be fat: now the first two daies after their putting up, give them nothing, the third day early in the morning give them a prettie quantity of dry Pease & Beanes, at none give them as much more, at four a clock as much more, & when you go to bed as much more, but all that day no water. The next day you shall feede them againe at the same houres and set water by them that they may drinke at their owne pleasures: twice o^r thrice a weeke as your provision will serve you, it is good to fill their bellies with swete W^ehay, Buttermilk or watme wash, but by no means scant their proportion of Pease and Beanes, and thus you may feede a Swine fat enough for slaughter, in a moneth or five weekes.

There is another way of feeding in Champion countries & that is at the Rake o^r stacke of Pease & Beanes, which Rakes must be

The Birds
of the
Muses.

as the wised Gouvernours & Councellers in Common weales, have taken the Wies for their patterne in choosing of Princes, distributing of Offices, rewarding of vertues, and punishing malefactors. Varro did alwaies call them the Birds of the Muses: and Virgill with wonderfull colours, doth eloquently set forth the Wies, their Common weale, Palaces, Buildings, Lawes, Hammeres, Warres, and Travailes, supposing them to be partakers of reason, and that they have some instinct from above, in that they so nare resemble the mindes of men, yea, many times excell them. If the King be taken, the whole swarwe is had: if he be gone, they disperse themselves abroad, for they cannot live without a King, hating as well the headlesse government, as the subjection to many heads. If the King, or (as we feare him) the Maister Wie die, the whole swarwe droppeth, and mourneth, they straight waies cease from gathering of Honey, they stirre not abroad, but onely with a hevy and sorrowfull humming, they swarwe and cluster together about his body. The nature surely of this paze creature is greatly to be wondred at.

Their Princes pallace is sumptuously built, in some severall part of their Hives, being mounted abobe the rest, which if you happen to bruise, you destroy the bwo. They live all as it were in a Campe, and duely keape their watch and ward, working together, and oftentimes sending abroad their Colonies, they are warned at their Captaines appointment, as it were with the sound of a Trumpet, by which they know both their times of warres, and truce: they ward all the day time at their gates in warlike manner, and have great silence in the night, till one of them in the morning humming out the discharge of the watch, they get them abroad to their businesse: When the sleepie time of the night comes in, they make lesse and lesse noyse, till one of them goeth about with the like sound that he gave in the morning, setting as it were the watch, and giving them warning to goe to rest: at which time they all suddenly hold their peace. In the morning (as I said) at the discharge of the watch, they coame straight to the gates, but flye not abroad, except theysic the weather will be faire; whereof by nature they have perfect understanding.

Being

Being laden, they lie with the wind: if any tempest suddenly arise, they counterpoise themselves with little stones, flying in the wind as neare the ground as may be: their labour, both at home, & abroad, is certainly appointed. They labour at the first within the compasse of thair storne paces about the Hive, & when the flowres there have borne sufficiently wrought, they send abroad their discoverers to finde out more fode. And when they fall all together to their busynesse, some wocke the flowres with their feete, others carry water with their mouthes, and droppes in their little stoes: the young lustie fellowes labour abroad, the elder at home. Those that goe abroad, do with their forelegs lade all thair thighes, which natu're for the nonce hath made tough: thus being loaded, Legs, Head, Backe, and all, as much as they may beare, they returne home, where there waiteth com-monly thre o: souce at the doore to unload them. Within, all this while are some laying in order, some building, some making cleane, and some making ready their meat: for they seide severally, for feare of beguiling one the other. They frame their houses archwise within the Hives, with two passages, so as they may enter one way, and goe out another. Their coames that they make are wrought full of holes, which holes (as Varro saith) are their Celles o: lodgings, made every one sixe square, according to the number of their set: these Celles they doe fill with Honey, filling every one in a day or two. These coames are fastened to the upper part of the Hive, & hang little upon the sides, not cleaving to the Hive, being now cornered, now round, according to the fashion of the Hive: as both Plinie reporteth, & I shall hereafter shew you when I speake of the framing of the combs. The Combs are kept up from falling, with small pillars and proppes below, so built as they may goe round about to repaire them. The thare first lostis of their Celles beneath, at e least empty for fear of the Hive: the uppermost are as full as may be. Such as are loiterers and idle vagabonds amongst them, are noted, ^{ment of} and punished with death.

Aristotle maketh many soz's and kinds of them, whereof he counteth the short speckled, & well knit to be the best: and next to them, the long ones like Waspes: the third, the kinde that you call the Thresh, with a very large bodie: the fourth, the

The kinds
of Bees.

The
Thresh.

Drone,

The
Drone.

Drone, being bigger then all the rest, wanting both his sting and courage to labour: and therefore they use to make at the entrie of their Hives small Gates, wherein the Bee may enter, but not the Drone. And the same Aristotle, in the chapt. before, saith, that there are two kindes of Kings o; Maister Bees, the one of a golden colour, which is counted the best: the other blacke, and partie coloured: they be twise as bigge as the other Bees, the tayles of them as long as one and a halfe of the other, they are called of some, the Mother of Bees, as the chiese breeders, because the young of the Drones are bredde without a King, but the other Bees never, Virgill following herein Aristotle, doth most commend the little, long, smooth, and faire Bee, and making mention of two sortes of Kings, he describes the worser, whereby he shall doe no harme.

Breeders.

The best
sorts of
Bees.

The shape
of their
King.

Destroy (saith he) and let the other live,
Whose golden hew doth glister in the eye :
And deck't with glittering scales, faire shew doth give,
Offarre more grace, and farre more Majestie.
With loathsome looke the other doth appeare,
And dragling drawes his tayle with heauie chears.

And as there is twosorts of Kings, so is there of the other Bees.
Some ugly seeme, and some againe doe shine,
Bedashit with drop of golden colour fine,

Being milde and gentle: so the Bee, the greater he is, the worse he is, and if he be angry, and fierce, and round, he is worst of all. And because (as I said before) the best are onely to be medled with, sith the good and the bad are alike chargeable, and require like tendance, and speciaall heed to be had that you mingle not the bad with the good: so lesse will the encrease of your Honey be, if some of your Swarmes be ill matched. You may stowre your selfe with Bees thare manner of waies, eyther by buying them, taking the wilde Swarmes, or making them by Arte. Such as you buy, let them be of the kinde and shape that I told you of, and be sure before you buy them, that the Swarmes bee whole and great, which

What to
be consi-
dered in
buying of
Bees.

which you may judge by looking into the Hive, or if you cannot be suffered so to doe, you may guesse it by other tokens: as if so be you see great numbers clustering at the doore of the Hive, and if you heare a great buzzing and humming within: or (if they be all at rest) putting your lippes to the mouth of the Hive, and blowing therein, you shall easily perceiue by their answering sound, whether their number be great or no. In buying them, beside, you must looke whether they be sound, or sicke: the signes of their being in health (as shall be shewed when I speakes of their diseases) is, if their Swarmes be great, themselves faire, and well coloured and worke lustily. Againe a token of their not being well: as if they be hayzie, looke loathsomely, and da-
stily, except at such time as they labour: for then they ware
leane and rough, with extreame travell. You must make your
coniecture likewise by their age, such as are not above a yere
olde, looke faire and smooth, and shine, as if they were Dyed:
the old ones are both in sight and feeling, rough and rugged,
and by reason of age, wrinkled: which nevertheless, for cu-
ning in making their Combs, experiance, industrie, and skil-
fulness in the weather, doe farre passe the others. In any wise Transpor-
see that you buy them rather from your next neighbour, then ting of
from a strange Countrey, or farre off, for they many times per-
ish by Change of ayre, or shaking in the carriage. And if you
be driven to carry them farre, take heede you neyther iogge, nor
tumble them: the best way to carry them is upon a mans shoul-
ders, and that in the night time, suffering them to rest in the
day, and powring in to them such sweet things as they delight
in, keeping them close. It is better removing them in the
Spring, then in Winter: for they doe not so well agree with
Winter. If you carry them from a good place, to a barraine,
they will straight wayes bid you farewell, and forsake their
Hives. When you have brought them to the place where you
meane they shall stand, if it be day time, you must neyther open
them, nor place them till it be night, to the end they may after
the quiet rest of the night, goe chearefully to their worke the next
morning. Be sure to marke them well besides for two or thre
dayes after, whether they goe all out or no: for if they doe, it
is a shrewd signe they will away. Sometime, if the place be
good

The re-
king of
Bees.

good, you shall assay to stote your selfe with wilde Bees : for although the Bees (as Plinic saith) cannot be rightly tearmes eyther wilde, or tame, yet Varro calleth them wilde that bræde in wilde places, and tame, such as we kepe at home : and affirmeth the manner of keping them to be divers. There is great stote of the wilde sort in Sarmatia.

The greatest token of Bees and Honey nere, is where they be in great numbers about the waters : for if you see the number but small, it is a signe it is no good place for Bees, and if so be you see they come in great numbers, you may sone learne where the stockes be : in this sort, as Columella and others have taught : You shall carry with you in a saucer, or such like thing, some redde colour, or painting, and standing nere to springs, or waters thereabouts, as fast as they come, touch them upon the backes while they are a drinking, with some little straw dipped in the colour : and tarry you there till such time as you see them retorne. If the Bees that you marked doe quickly retorne, it is a token their houses be not farre off; if it be long ere they come, it shewes they dwell farther off : wherefore you may judge by the time. If they bee nere, you shall easily finde them, if they be farre off, you shall come to finde them in this sort : Take a piece of a Ræde, or a Key, with his knots and joyns, and making a small hole in the side, poure into it eyther Honey, or some sweet thing, and lay it by the water : and when you see the Bees haue found it, and entred the hole for the savour of the Honey, stoppe you the hole with your thumbe, and let but one goe out at once, whose course you shall follow, as farre as you can see him, and this shall bring you part of the way : when you can no longer see him, let out another, and follow him, and so another, and after another, till you come to the place. Others use to set some little vessels with hony by the water : which when some one Bee or other hath hapned to taste, she giveth straight knowledge to her fellowes, whereby by their flying in number, they come to finde out their dwellings. If you finde the Swarme to be in some such hole, as you cannot come at them, you shall dixe them out with Smoke, and when they be out, bring them downe with the singeing of a lattin Balon, so as they may settle upon some tree,

To finde
out the Bees.

from

from whence you shall shake them into your Hive. If the swarne be in some hole above in the banches, you may sawe off the branch handesomely, and covering it with a white cloth, place it amongst your Bees. If they be in the body of the tree, then may you softly sawe off the tree aboue the Bees, and afterwaards close underneath them: and being covered as before, carry them home, stopping well the chinks and rifts, if there be any. He that seeketh the Bees, must begin in the morning, that he may have the whole day before him to marke their labouring. Thus farre of the kinds of Bees, and getting of them: now will I shew you of the placing of them, ordering, and keeping of them. The place for your Bees and your Hives must be so chosen, as they may stand quietly and secret, standing specially in such place, as they may have the Sunne in Winter, and in the Spring time alway at the rising, and such as is neyther too hot, nor too cold: for the excesse of eyther doth hurt them, but rather temperate, that both in Sommer and Winter, they may have moderate warmth, and wholesome ayze, being farre removed from the company of eyther man, or beast.

For they most of all delight in quietnesse: beware beside, that there be no hurtfull creature neare them, as the ^{mine and} ~~Cod~~, that with his breath doth both poson the Bee, and also draweth them to him; the Woodpecker, the Swallow, the Sparrow, the Starke, Spiders, Hornets, Butterflies, Serpents, and Mothes.

Drive from thy Hives the hurtfull Lysart greene,
Keape Throstles, Hennes, and other Birds uncrew:
And Frogne, on whose brest as yet is seene
The bloody marke of hands that Itys flew.
All these destroy thy Bees, and to their nests doe bear
Such as they take in flight, to make their young ones cheare.

Of such things as hurt your Bees, I will hereafter speak more, where I shall shew you of their diseases & harmes: in the meane time I will goe forward with the placing of them. The place where they should stand, would rather be in the valley, then be-
tter for the Bees, then the hill,
te high: but so as the rebound of no Ecco, doe hurt them, which sound is very noysome unto them: so shall they lie with more ease.

ease and spied to the higher places, and come laden downe a-
gaine with lesse trabaile. If the seate of the house will so suffer,
it is good to have your Bees stand neare your house, and to be en-
closed with a hedge, or a pale : but on such side as they be not an-
noyed with the sent of unk, privie, or dunghill. The best stan-
ding, is within the sight of the master, by whose presence they
are safest kept. For their better safety (if you seate them) you
may set them a yard or more from the ground, enclosing them
with little grates left open against every Hive, or so lettised
with stone, as a Bee may easily come out and in, and escape
both Birds and Water: or if you list, you may make a little
house by for the keeper, wherein you may lay your Hives
for your Swarmes, and other necessaries made for your Bees,
setting neere to the Hives some Haddowing Trees for them
to swarne upon.

If it may be, let them have some faire spring neare them, or
else some water conveyed in a pipe : so without water they can
neither make Honey, Waxe, nor breed up their young.

Round about the Bee-yard, and neare to the Hives set hearbs,
plants, and flowres, both for their health, and profit : specially
such as are of the sweetest and delicatest sauour : as Cuthylus,
Time, Cassia, Rosemary, Savory, Smallage, Violets, Sage, La-
vender, Myrtle, wilde Marierum, wilde Time, Balme, sweete
Marjetum, Haffton, Beanes, Mustardsseed, Poppey, Hellilot, &
Roses. And if there lie Ground neare it for the purpose, sow it
with Rape seede, and Bechwheat : so they wonderfully delight
in the flowres hereof. Plinie writeth, that Bees delight greatly
to have Some flowres neare them : of trees they most delight
in these. The Pine, the Willow, the Firre tree, the Almond, the
Peach, the Peare tree, & the Apple, and such as the flowres thereof
be not bitter. Of the wilde sorts, the Terebinth, the Lentise,
the Lind tree, the Cedar, and the Hallholme. The best honey (as
Palladius saith) is made of time : the next of wilde Time : the
third, of Rosemary. You must remoue from your Bees, the Pew-
tree, Box, & the Cornel : Plinie would also have the Olive away.
Banish also all the kinds of Spurge : so with that, as also with
the flowres of the Cornell, they fall into a flix and die. Besids you
must suffer no Wormewood, nor wilde Cucumber to grow
neare

Faire wa-
ter neces-
sary for
Bees,

Hearbs
that Bees
delight in

nere them, for they both destroy the Bees, and spoyle the honie. Hearbs
And because the flowre, or fruit of Climes doth specially hurt ^{to} noysome
them, therefore in such parts of Italy where plenty of Climes
grow, the Bees do not long continue. Touching your hives, they
are made of divers fashions, according to the manner of the
country, some are made round, some square, some three foot in ^{of the hives}
height, and one in breadth, made very narrow toward the top,
lest the Bees shold overlabour themselves in filling of them.
Some make their hives of Lanterne horne, or Glasse, to the end
(as Pliny saith) that they may view the manner of their wo:
king. Varro maketh mention of earthen hives will plaiſſered
within and without with good Dre-dung, so as the roughnes &
ruggednes cannot displease them: but for all that, the earthen
hives be the wort that may be, because in Sommer they be too
hot, and in Winter too cold. The best hives, are those that are
made of Cork, wicker, or rindes of trees, because they keape out
both cold and heat: the next are such as are made of straw and
Wents matted together, two foot in breadth, and so much or more,
according to the number of your Bees, in height. In some places
they make them of one piece of wood, cut and hollowed so: the
nonce, or of ioyned boordes, five or sixe foot in height, and thyselvē
neither are too hot in Sommer, nor too cold in Winter. Of
these wooden hives, the best are those that are made of the
Figge tree, Pine, Ashe, and Walnut, of such length (as I told
you) and a cubit in breadth. Besides, they would be covered
with either Lime, or Dre dung: so so (saith Florentine) you
shall keape them long without rotting. You must also boore
them through slopewise, whereby the winde gently entring, may
drye up all cobwebbs, or such like noyances: You must alwates
have good store of hives lying by you, that may be removed, and
easily carried where you list: so: the fired, or standing hives, be
discommodious, as which you can neither sel, nor remove: though
Celsus saime to commend the standing hives, because they are ^{How you}
neither subject to stealing, nor burning, being made of Wicke, ^{must place}
or Loame. It is enough to have three rankes of them, one above
the other: for the keeper shall have enough to doe to overlooke
the uppermost. The part where the Bee doth enter, must
stand a little lower then the hinder part, so as the raine can
not cumme in, and the water (if there be any) may easilly boide.

And because cold doth more annoy the Bees, then heate, you must arm your hives well behinde, against the hurt and bitterness of the North wind, and let the sunne come bountifullly to them in the front. And therefore it is best for you to make the holes wher they come in and out, as small as you may, that they suffice onely for the bignesse of the Bee, partly for a boording of cold, and partly to keepe out the Creets, Beetles, Butterflies, Flatts, Spatthes, and such other hunsfull vermine, that would otherwise destroy the Combes: wherefore it is good you have two or thre such smal holes together in every hive, for the commontie of the Bee, and to restraine the enemie.

When the
Bee resteth.
The be-
ginning
and order
of his tra-
vaille.

Thus having declared unto you before their toile, their diligence, and order of their travaile, I will now likewise shew you what time they begin to labour. In the Winter time, from the setting of the seven staires, til the beginning of the spring, they keape their houses, and come not abroad, by reason of the cold: in the spring, they come straight abroad, & from that time forward (if the weather let them not) they never rest day. First of all, they frame their Combs, and War, that is, they make their houses and chambers, wherof they make so many, as they think themselves able to fill: then fall they to breeding, and last of all, to making of honie. Their Ware, they make of the flowres, trees, & plants: their honie, of the gums and clamminesse of trees that are growing, as Willowes, Elmes, Row, Juice, Gumme, and Rozen: Aristotle saith, they make their Combs of flowres, their Ware, of Gummies, and their Honie, of the dew of the Ayre, that falleth chiefly at the rising of the seven staires, and that there is no honie made before the rising of the seven staires, their combes of flowres, and that the Bees doe not of themselves make the honie, but onely gather the honied dew that falleth, because the keepers finde the Celles to be filled in some one, or two dayes: & that the honie being taken away in the end of Summer, the hives are not found to be furnished againe: though there be flowres enough at that time. This, and much more hereof (saith Aristotle) whom Plini following, affirmeth honie to be made of the Ayre most of all, at the rising of the staires, chiefly the Dogge Rynning out early in the morning: wherefore you shall find, in the morning betimes, the leaves of the

fras bedewed with honie, as you shall likeknise have the Apparell, Hayze, and Beards, of such as have bene early abroad in the mozaing. But Common people call it Manna, or Honey. Manna, dew, cleaving to the leaues before the rising of the sunne, as it were snowe, or rather Candied sugar. Whether it be the sweate or exrement of the Heavens, or a certaine spittle of the Starres, or a iuge that the ayre purgeth from himselfe: howsover it be, I woulde to God if were such as it first came from above, and not corrupted with the vapours and damps of the earth. Besides, being sucked up from the leaues by the Bees, and digested in their Bodies (for they cast it up at their mouthes) and also disperced with the sent of the flowers, ill seasoned in the Hives, and so often alited and transformed, losing much of his heavenly vertue, hath yet a pleasant and speciall celestiall sweetnesse in it. The best Honey is of Lime Honey of (as I have sayd before) and god likewise of Cicheras, of the Tyme. Figgis bee very pleasant: Varrus saith, they take not their sustenance, and their Honey both from one. A great part of their foode is water, which must not be farre from them: and must be very cleane, which is greatly to purpose in making of good Honey. And because every season suffereth them nat to be abroad, they must at such times be fed, least they should then be forced to live all upon the Honey, or to leade the Hives empty. Some give unto them Water and Honey, sodden together in little vessells, putting into it Purple wolle, through the which they sucke it, for feare of drinking too much, or drowning themselves: others, dry Figgis, either stamped by themselves, or mingled with water, or the drasse of Grapes, or Measins mingled with sweete wine, and rooks made therewith, or with Honey: yea, I have sene some use (but in my fancie without reason) to give them Way salt. Whereover, as the Bees require great looking to continually, and their hives dayly attendance, so most of all they craue diligent regard, wherunto if you have not a great god eye, they will bid you farewell, & sickle a new Master. For such is the nature of Bees, that with shrye princie, is had a Commonwealth, which as soone as they are able to travaille doe as it were dischaine the government and fellowshippe of the thereto, Going a-way of Bees, and the tokens old

Going a-way of Bees,
and the tokens ther-of.

old Bee, which most hapneth when the Swarmes be great and lustie, and that the old Stagers are disposed to send abroad their Colonies ; and therefore you shall by two tokens specially know When the new Princes with their people will ab-had. The first, when as a day or two before they cluster and hang (specially in the evening) about the mouth of the hibe, and seeme to shew by their comming out, a great desire to be gone, & to have a King-dome and Countrey by themselves : which if you prepare them at home, they content themselves very well with it. And if the Bees per provide not for them, taking themselves to be greatly iniured, they depart, and seeke a new dwelling. To prevent this mischiefe, Columella willes you to looke diligently to them in the Spiring time about eight of the clocke, or at none : after which houres they commonly goe not away, and to marke wel their going out and comming in. The other signe is, that when they are readie to flye, or going, they make a great humming and noyse, as Souldiers ready to remoue their Campe. At their first comming out, they flye aloft, playing up and downe, as it were tarrying for their fellowes till all their company come. Pea, many times the old inhabitants, being wearie of their dwellings, doe leave their hives, which is perceived when they come so out, as none remaine behinde, and presently mount into the ayre; then must you fall to ringing of Pans and Basons, to feare, or byng downe the tun-always, who being amazed with the great and sudaine noyse, doe either presently repaire to their old hibe, or else knit themselves in swarme upon the branch of some tree to the place: then must the keeper out of hand be ready with a new hibe prepared for the purpose, and rubbed with such heacbs as the Bee delights in, or sprinckled with little drops of honie (I have seene in some places used Creame) and so shaking them into the hibe, and covering them with a sharte, let him leaue them till the morning, and then set them in their place. He must (as I told you before) have divers new hives in a readinesse to settie the turne withall. And if so be you haue no trees nor bushes growinge neare the hives, you must thrust into the ground certaine boughes & branches for the purpose, wherupon they may knit and

Bees delight
in new
hives.

and settle themselves, and rub over the boughes with Balme, or such pleasant hearbs, that when they (as I say) knit and settle, putting under the hive, and compassing them with some little smoke, you may cause them to fall into a new Country: for they will rather goe into a new hive, then into an old: yea, if you offer them the hive that they came from, they will forsake it for a new. Some of them will suddenly leave the hive without any farryng, which the keper may perceive, if he use to lay his eare in the night time to the hives: for about thre dayes before they goe, they make a great noise, like Souldiers ready to raise their Camps.

Signes of
suddains
departing,
and reac-
tions.

And therefore when such noise is heard, they must be very wel watched, whether they come out to fight, or to fly, the keper must be at hand: their fights, whether it be among themselves, or one hive with another, are easily sickled:

A little dust cast up on high,
Doch end the quarrell presently.

Or Honied water, swet wine, Broath of Reasins, or any pleasant liquour, wherein they delight, cast and sprinckled amongst them both straightways part them. The selfe same remedies makes two Princes of them, being fallen out, to be quickly good friends againe: for when there hapneth many times to be in one hive sundry Kings, by whose dissencion the whole number of the Subjects, in the Princes quarrels, goe together by the eares, you must by all means seeke to remedie it, least by civill dissencion, the poore people be destroyed. And therefore if you perceive them often to fight, your best is to hil the headdies of the dissencion, and to appease the fury of the fighters, by those meanes that I told you before. And when the Partiall swarne is settled upon some branch of a tre, look if they hang all together like a cluster of G;apes, which is a signe, that there is either but one King, or if there be moe, they be agrēd: then you shal not trouble them, but take them into the hive: but if so be they hang in two or thre clusters, like the Paps o; Udders of a beast, it is a signe there are divers Master Bees that agree not together: for which you shall search where you see the Bees to cluster most. Therefore annoiting your hands with the juice of balme, or Bēwort, that they may abide you, thrust in your fingers losly amongst

Divers
Kings in
one Hive.

A a 3

them,

The shaps
of the
King.

To kepe
the king at
home.

The Drone.

Time for
taking the
Combes.

them, and shedding the Bees, search well till you have found the ring leader of the dissention, whom you must take away. & that the proportion and shape of the King is, I have told you a little before, that is, something longer than the other Bees, and lesser winged, of a fairer and glistering colour, smooth, & without sting. Howbeit, some of them be shagheared, and ill coloured, which are naught, to be killed: Let the best (as he saith) weare the Crowne: who must himself also be depriv'd of his wings, if he be too busie headed, and will alwaies be carrying his people abroad: so shall you, with the loss of his wings, kepe him at home spight of his teeth, whil's he dare not for want of his wings venture out of the doores, & so shall he kepe his people at home. Dydimus writeth, that the Bee's will never go away, if you rub the mouth of your Hive with the dung of a new calved Calfe. To the same end serveth it, if you stamp the leaves of wilde Olives, and Garden Olives together, and annoint the Hives in the evening there-withall: or if you wash the Hive & the wallles with honey sodden with water. When an old Stocke is come to a small number, & that there be not Bees enough to furnish the Hive, you must supply the want with a new Swarne, destroying the King of the first Swarne in the Sowring, so shall both the Swarms dwell together in amitie with the old Parents, as shal be shewed you hereafter, where I meane to speake of repaying the Stocke. The Summer being past, ensueth the time for taking of Honey, to whiche harness the traueil of the whole tendeth. The time for gathering thereof, Columella teacheth to be then when we perceive the Drones to be driven out, and banished by the Bees: for thence they Drive the drousie Drone away. This Drone is an untermeynlyng, and an imperfet Bee, but very like unto the Bee, save that he is bigger boord, lying always idle in the hive, not labouring himself, but feeding like a lubber on the sweat of his fellowes, yet serueth he for the breeding and bringing up of the young: which when he hath done, they thrust him out of the hive. Varro appointeth three seasons for the taking out the honey: the first at the rising of the seuen Stars: the second in Summer: the third at the setting of the seuen Stars: this signe is when the hives be hearie, and that they be double furnished. You may make your conjecture by the Bees, when they make great noise within

within, and when you se them stand dauncing, and playing at their domes, as also, if looking into the Hive, you perceve the mouthes of the Combs to be covered with a Honey slime. Dydimus thinketh it to be the best time at the first harwest, the rising of the seven Starres, or the beginning of May: the second, the beginning of Autumnne: the third, the setting of the seven Starres, which is about October: howbeit, these times be not alwayes precisely to be observed, but according to the sojourndesse of the season: so if so be you take the honey before the Combs be ready, they take it ill, & presently leave working. The time for gelding or driving your Bees, is early in the morning: for you must not at none trouble your hives. For this kinde of gelding of your hives you must have two instruments for the nonce, a foot and a halfe long and more: the one of them must be a long knife of a good breadth, having at the end a bending crooke to scrape withall: the other must be plaine, very sharpe, that with the one you may cut the Combs, and with the other scrape them, & draw out whatsoeuer dreggs or filth you finde in them. And if your hives be not open behinde, you shall make a smoke with Galbanum, or Draydung, being put into an earthen pan made so the purpose small at the one end stony whence the smoke shall come, and broad at the other, from which you shall blow up the smoke from the fire, in such sort, as Columella sheweth you. This pot you must suffer at the first, to smoke into the hide, & afterward round about without, & so shall you drive them. He that medleth in this case with the Bees, must specially kepe himselfe frant lechery, & drunkennesse, and wash himselfe cleane: so they love to haue such as come about them to be as pure and cleane as may be. They deight in cleanlinesse so much, as they themselves doe remoue from them all filthinesse, suffering no filth to remaine amongst their labours, raking up in heaps together the excrements of their own bodies, which in the rainy daies, when they wooke not abroad, they remoue and throw out of the hive. If you set Garlick by them they will sting all that come nare them. Their anger is chiefly asswaged by the presence of those that use to them, at whose comming they ware milder, being incl aquainted with those that are their keepers. If there be two swarnes in one hive, and agreed together, they haue two sorts and manner

Gelding or
driving the
Hives.

Bees hate
thieves and
uncleane
persons.

of Combes, every swarne abseruing his owne ayre, but all the Combes so hang by the rases of the hives & lves, as they touch not the ground where the Bees use chiesely to walke, as I said before of the building of their Combes. The fashyon of their Combes, is alwaies according to the fashyon of their hives, sometimes square, sometimes round, sometimes long as the hives are, in which they are fashioned as in a mould. Plinie Inseth, that there were Honey-Combes found in Germanie, of eight foote in length: but howsoeuer they be, you must not take them all out, but must use discretion in taking of them. Amongst our people in the first Bee harvest (if I may soe acme it) they use with their crooked knife, to pare away no more but h emptie Celles, till they come to those that be full, taking heed that they hurt them not: & this they do in the spring. In the latter harvest, that is, at the end of summer, they take the Combes full of Honie, in such sort, (as I told you) during the old Bees, & alway keping & preseruing the yong swarmes. In the first taking, whē the Peddowes are full of flowres, they leabe the fist part of the Combes behinde: in the latter harvest, when winter approcheth, they leabe a third of their Combes so: the sustenance of the Bee. But this quantity cannot certainly be prescribed so: all Countries; but must be measured according to the abundance, or want of flowres. Dydimus Thalesus, thinketh good to leave them a tenth of their Combes in the summer time, if the Hives be very full, otherwise, according to the proportion: and if they be empty, not to meddle with them. Plinie would not have the Honey of the spring time (which he calleth flowre Honie) to be medled withall, but to be spared. Others leave no Honie at all for them, because of the abundance of flowres that are then springing, which is the chiese foundation of their Combes. Such as be shiffullest doe leave the Bees a twelvth part of their labour: and this they doe about thirtie dayes after the swarne, which they make an end of commonly in May. The old and the corrupt Combes, are so: the most part at this time taken away: and the sound, and such as are filled with Honie, left. In taking of the Honie at the later time of the yare, they use to destroy the oldest stockes, to save the charges of feeding of them. This driving and gelding of Hives is not com-
monly

monly used in the Countrey, but they rather, according to their custome, at the end of the yeres burne them, alledging for their authoritie an old English Proverbe of their owne :

Drive Bees, and lose Bees ; burne Bees, and have Bees.

And in some places they doone them. When you habe thus spoiled your Vibes, you shall carry all your Combes into some handsome place, where you meane to make your Honey, & flop up all the holes and crevisses of the walles and windowes, as close as you may : so the Bees will be very busie to recover the prey. Whensoeuer you take your Combes, I wote that you straine out the honey the same day, while they are hot & new. The honie that you take at the full of the Moone (as Plinic saith) yieldeþ most, and the fayrer the day is, the thicker it is. The Combes being taken out, let them rather be warmes, then heated, least by over-heating them, you straine out the Waxe with the Honie : afterward, put them into a good strong bagge, and with a Preſſe or other Instrument made for the purpose, or with a Wicker Basket, preſſe out the Honie ; but ſee that before you preſſe it, you ſever from it ſuch Combes, as habe in them young Bees, called with ſome, Gubbes, or any red or rufy drosse : for these with their chill iuyce corrupt the Honie. When the Honie is thus strained out, it is put into earthen vefſels, & ſuffered to ſtand uncovered a ſew dayes, til it haue wrought, & caſt up aloft all his Drags, which you muſt often ſcum off with a little ſtieke : but in many places they are not ſo curiuious, but tumble all together, & foſel it groſſe as it is. The beſt Honey is alwaies in the bottome, as the beſt Wine aloft, and the beſt Wine in the midle.

The beſt Honey was in the olde time thought to be in Athens, and in Sicill : it is now thought very god that commeth The beſt Honie.
from Moscouia, and the North-eaſt Regions. The Honey at the beginning is thin as water, and after the straining, it waxeth thicke, and afterwards is covered with a thin rine, or flime, where the ſroth of the purging is gathered together. The beſt Honey, and leaſt infected, the Bees doe gather from the leaves of the Oak, the Lind tree, and the Ned. There is three sorts of Honey, the beſt kind is that which is called Autum, or flowys,

Three sorts
of Hony.

Honey-hony, made in the spring time: the next, is summer hony, or hasty-hony, made in thirty dayes after the tenth of June when the Dogge begins to come in: the third is Heath-hony, a wilde kinde of hony, and not allowed, being gathered after the first shoures of Autumnne, while the heath is flowered: therefore like the Sandy hony. The best hony (as Diophanes saith) is cleare, yellowish, smooth in touching, and fine, coping, if it be dwauen in length, & long sticking together, clammy, & hard to be got asunder: the hony that is of the worst making, is to be boiled. Bread, if it be dipped in it, doth straight corrupt it and therefore take heed you put it not where bread hath bene. The fragmēts of the Coame that hath once bin pressed, being taken out, heated & strained againe, do make a second hony, which you must put up, and keepe by it selfe, for spoiling of the other. Naughtie, and counterfeit hony is discerned by the burning, for ill hony burneth not cleare, as the said Diophanes witnesseth. The wolle that remaineth, after the pressing, after that you have diligently washed it in swet water, must be put in a brasē Calowen, & putting a little water thereto melted upon the fire, which when you have done, you must straine the wolle through a hīve, or such like thing made of Rialw, or Rushes; and after sc̄t̄h it againe, and pouing it into some vessell with water, from whence you may easily take it, make it up in cakes, or what fasshion you like. Pliny writeth, that the Coames must first be washed well, and afterward dryed in the darke, for the space of thre dayes, & the fourth day set upon the fire in a new earthen vessell, so as the Coames be covered with water, and then strained through a hīve: last of all, boyled againe in the same vessell, and the same water, and pouing into vessells with colde water, having their sides nointed with hony. The wolle will be very white after it hath stood in the Sunne, and bene twise sodden: you shall make it blacke with the Ashes of Paper, and being mingled with Vermillion, it will be red, and so other wise coloured as you list.

The age of
Bees.

Their age (they say) may thus be knownen. Such as are not above a yere olde, doe shīne, & looke as they were newly oyled: the old ones be tough, shaghad, wrinkled, loathsome and ill favored to looke upon, howbeit, for making of Coames, these are the best. Aristotle in his booke before mentioned, affirmeth, that

Bees live lire or seven yeres, and that if a stocke continue nine or ten yeres, the keper of them hath god luke. Pliny writeth, that one stocke was never seene to continue abobe ten yeres, notwithstanding you supply the places of the dead every yere with new: for commonly in the tenth yere after the first hiving, the whole stocke dieth. And therefore to avoide the mischiefe of being utterly destitute, it is god to encrease the number of your hives with new Swarmes every yere. And if so be your Bees, through sudden storme, tempest, or cold, lie dead upon the ground, you must gather them together into a platter, or a broad basin, and lay them in your house toward the South, specially if the weather be god; after, cast amongst them Ashes of Fig tree wood, being something moze hot, then warme, shake them gently up & down, so as you touch them not with your handes, & so setting the into the Sun, they will (as Varro saith) quicken again. To whom Columella subcribing, addeth, that such Bees as you find dead under your hives, if you lay them up in a dry place all the Winter, & bring them out into the Sun in the Spring, when the weather is faire, and sprinkle them with the foresaid Ashes, they will recover within a few houres. They that list, may prove it. I have not hitherto tried it. Marcus Varro holdeth opinion, that Bees are engendred sometime of other Bees, & some times of the body of a young Bullocke putrifid, reciting this Epigramme of Archelais.

Of Steere that strangled is are children strangely bred,
Of Horse engendred is the Waspes, and Bee of Bullocke dead.
The Horses breed the VVaspes, the Bullocks breed the Bees.

For a young Dre, or Sterre, being strangled, corrupted, and cast into some such place, where the putrifid vapour cannot breath out, and stoe of hearbs and flowres, agreeing with the nature of the Bees thusk into the body, as Time, Cassi, and such like, wherewith the vapour may be tempered, you shall hereof quickly have Bees, even as you may of the body of a horse likewise ordered have Waspes and Hornets.

The manner how Bees are engendred of a Bullocke, Virgill Bees made doth largely discourse out of Mago, and Demberius. You must of a Steere, frame a little house foursquare, about ten cubits in breadth, & it is much in heigh, with some windowes, an every side one. A yong fat

To revive
Bees that
be dead.

Making of
Bees.

sat therre being brought up hitherto, his Nose, his Eares, and all other open vents stopped, & filled with linnen dipped in Pitch, must be beaten with numbers of clubbes to death, so as both the bones and the flesh may be broken without any bloud: for as the bloud cometh the Wex. Afterward, the house being daepe strewed with Lime, & the Bullocke laid upon his backe, the dores and the windowes must be close shut up, & so plaistered, as there can no aire enter. Thre weekes after, the windowes must be opened on every side, save where the winde bloweth strongest, & the light and the aire let in: when it hath bin wel coaled & refreshed, the windows must be shut up again, & made as close as before: and being opened the eleventh day after, you shall find the house full of Bees, and nothing left of the Oxe, save the bones, the hayze, and the bones: they hold opinion besides, that the Kings are engendred of the braine, and the other Bees of the body.

Signes of
Sicknesse in
Bees.

The signes and tokenes of their health, as if they be lively, quicke, and many in number: if their workmanship be neatly and equally wrought: if they goe about their busynesse chearefully, and if they looke faire and smooth. The signes of their not being in health, is, if they looke loathsome, be tough & hayzie, except in the time of their labour, when they commonly looke like laborers, or be dwoulis, or if you see them carrying out of dead carckasses, and following the corsses after the mourners, or that you heare no noise, nor stirring amongst them. These signes when you see, Columella willeth you to give them meate in little troughe of Redes, specially Honie sodden, and ground with Galles, or Rosses. You must also to heale them, perfume them with Galbanum, Scorax and Beniamine, Redins, or olde strigges of Grapes. If the King happen to bye, the common people waile and mourne with great heaviness, neither will they make any provision for their obane sustenance: and therefore if you see them not, they will famish themselves.

The diseas-
es of Bees,
and the
remedies.

They are many times infected with the Pestilence, against which you have no other remedie, then to sever the Vibes satte asunder. Their chiefeſt & early sicknes, is in the beginning of the ſpring, when the Spurge and the Elm do both flowre: for as upon new ſruites, ſo at their firſt coming abroad, entised with these new flowres, being almost hunger staruen with the

Winter

winter passed, they s̄o grēdilī as they fall into a flir, wher, of if they be not quickly remedied, they die. For Spurge doth lose the bellies of all other creatures, but the flowres of Elme bringeth only the flire to the Bees. And therfore in such Countries, where there is great plentie of these trees, the bees cōtinue but a while. Columella teacheth you against this disease, to give them Rosemary sodden with waſer and Honie: ſome againe ſe to give them the ſtale of men, or Bullocks: as alſo the graines of the Pomegranate beaten, and ſprinkled with wine or Reaſins, with the like quantitie of ſpanna kneaded together, and giuen them in Sharpe wine, boyled in an earthen vefell, & poſtured into little Redes. Virgil describeth an hearke, called Aumellus, with a yellow ſtalke, and a purple flower, the iuyce of whose roote being ſodden in old wine, and strained out is very god to be giuen them: Columella out of Higimus, teacheth to remedy them in this ſort: First, to take out all the rotten and corrupt Combes, and to giue them fresh meate and after to perfume them with ſmoke. It is god alſo to put to a decayed hive, a new ſwarme, as I ſaid before. Many times they die of a disease which they call, The great devouring, which hapneth when they habe made ſo much ware, as they think they ſhall be able to fill, and afterwards, by ſtorme & tempeſt, many of them be deſtroyed, ſo that the remaine ſufficeth not to fill the Combes, whereby the empie parts of the Combes becometh rotten, and by little and little infegeth both the honie and the Bees: For which the onely remedie is, either to put in a new ſwarme to fill up the cells, or if you habe no ſuch ſwarmes, to cut away part of the Combes beſore they come to be naught, which you muſt do with a very Sharpe knife, ſo ſcarfe of diſplaſing the reſt of the Combs. A caufe beſide many times of the death of the Bees, is their too much proſperitie, as when there are diuers yeres great abundance of flowres, and the Bees ſo busie in their ſeeding, that they forget their braeding, who overwearying themſelues with traiale, they die, not leaſing any brode behinde them. It is caſted Blapfigonia, when either by ſickneſſe, flothfulnes, or barrenneſſe, they leaſe no fruit behinde them. To remedy this: It is god every third day, to ſhat up the hives close, leaving but very ſmal holes, out of which they canot creape,

creape; so shall they be forced to looke to their bronde, when as they cannot otherwise range abroad. Many times besides they are the cause of their own deaths, when perceiving their Honie to go away, they fadre too greedily. Their owne hony doth also many times destroy them: soz beiag touched with it on the back, they are so limed, as they cannot sticke: and Dyle doth not only kill Wes, but also all other like creatures, flies, & Warmes. They hate all filthy fauours, and stink such as smell of Dyniments: they are often besieged with Wasches, Hornets, & great Gnattes: the Swallow doth oftentimes spoyle them: the Wood-pecker doth with his long tongue, thrust into the hibe, licker up their honie: & divers other Birds (as I have said before) annoy them. The Cote bloweth them, and sucketh them up at their own houses, who sustaines no hurt by their stinging. Whiche are also hurtfull and troublesome to Wes, in whose flisces they tangle themselves, as they can hardly get out.

Concerning In what sorte they are to be driven and gelded, it is shewed before their hives. soze: but at this time, & till the twelvth of september, the hives must be opened every tenth day, and smoked. The hives being thus smoked, you must refresh the Wes, with sprinckling & casting into the emptry parts of their hives, very fresh and cold water: and if any thing remaine, not washen away, you must sweape it out with a Coose wing. Besides, the Spottes, if they appeare, must be swiped away, and the Butterflies killed, which dwelling in the hives, are commonly a bane to the Wes: for they both eat up the Ware, and with their dung doe bronde

To destroy a kinde of Warme that they call Hive-mothes. These Butterflies, flies, as Colmells teacheth, you may when the Swallow flyzeth (at which time there is greatest number of them) destroy in this sorte. You must have a vessell of brasse, very high & straight, narrow necked and mouthed, in the bottome whereof you must have a light, and set it in the shewing nere unto your hives, and you shall see all the Butterflies straightwaies fall to the light, and while they play about the flame, they burne themselves, while they can neither get up, by reason of the straighnes, nor shun the fire, by means of the brasen walles. Without the rising of the Dogge, and of the Weareward, which are almost partie dates, you must take good heed your Wes be not spoyle by Hornets

Buzzets, which at that time lie in waite for them, when at their owne daies. After the rising of the Bearward, about the twelvth, or fourteenth of September, is the second harvest of your Honey: from that time, till the setting of the seven stars, which is about fortie dayes, the Bees do provide for their winter stoe, of the flowres of Heath, Tamariske, and other bushes and shrubs, of which provision you must take nothing, lest you discourage them, and drive them away: from the setting of the seven stars (which is about the entrance of November) the beginning (if we may believe Plinic) of winter, the Bees live all the winter long upon such stoe of Honey as they have laid up: at this time, the Hives must be opened and cleansed of whatsoeuer filth is in them, and diligently scrubbed; for during the winter time, your Hives must neither be opened nor stirred, and therefore in the end of Summer, while the weather is yet milde and temperate, your Hives being made cleane in some sunny day, see that you thrust under them certaine close cobers that may reach to the very bottome of the Coames, not leaving any boide space, wherby the hive shal be the warmer. When you have this done, close up every rift & open place with Clay, and Bullockes dung mingled together, daubing it all over without, leaving onely a little hole to come in and out at. You must arm them also against the cold tempest, with good covertures of straw and Boughe. Some use to put in the hives small Birds being dravien, which with their feathers kepe the Bees warme all the winter, & therewith, if they happen to lacke food, they feed themselves sufficently. Be ait hath bene scorne, they have so fed upon them, as they have left nothing but the bare bones: howbeit, as long as heire honey sufficeth, they never medole with the birds. It is very god and necessary (as I told you before) to set them meat in little troughs or bodes, to defend themselves against famine. When Winter is past, in the space of forty dayes, they make an end of all their honey, except their keeper deale the more liberally with them. It hath often also bene scorne, that their Combes being emptie, they have continued fasting, till the Ides of Februarie, and cleaving to the Comber, as if they were dead, yet have rayned their life: but least they shold lose it altogether, it is god to powre them in

Not stir-
ring of Bees
in Winter.

some sweete liquours by little pipes, whereby they may sustaine their lives, till the Swallow with her appearing, promise a wel-comer season.

After which time, when the weather will suffer them, they begin to looke abroad so; themselves; soz after the Sunne is in the Equinoctiall, they never rest but travell painefullly every day and gather flowres, and necessaries soz their breeding.

Besides, because few places are so fruitfull, as to yeld flowres both Sommer and Winter: therfore in such places, where after the Spring and Summer (at which times, both Beans, Rapes, Willows, and other plants and hearbs, in every place do flowre) the flowres doe sayle, they are carried of divers (and that in the night, as I told you before) into such places, where-as there is god store of late flowing hearbs, as Lime, Wilde Marierum, and Savery, wherewith they may be fed, and gather sod at their pleasure: and as Columella writeth, that Bees in the olde time, were brought from the fields of Achaia, to the pastures of Athenes, and so transporzed in divers other places. So may we with us carry them from places where the flowres be consumed in the Spring, to the Summer flowres, as Clover and such other: and after that, about the end of the Summer, to places furnished with Heath, Tamariske, and such other late bearing flowres. For the auoynge of this inconuenience of carrying from place to place, I will shew you in what sort I have ordez my Bee-yard at home. And because Master Hersbach hath shewed you before in his Garden many god hearbes, and yet not whereto they serue, I will shew you a few plants, that I have set about my Bees, serving both for their commoditie, and the health of my houshold: I have chosen of a great number, such as be most necessarie, and of greatest vertue: whose speciall vertues, and wonderfull workings, given onely by the most gracious and bountifull framer of the world, and being as it were sucked and spalme out by the carefull toyle and diligence of the Bee, must needs adde a greater perfection to their honie & their ware. I have first enclosed the yard where my bees stand, with a quicket hedge made of Blackthorne and horn-suckle, the one serving the Bees with his flowres at the beginning of Spring; & the other at the latter end of Summer. The first, the Blackthorne

Black-thorne beareth a pleasant white flowre, so much the welcomer to the Bees, as it is the very farewell of the winter: for Blackethorne.
 he commonly flowreth not till the winter be past. These flowres
 newly gathered and stoped all a night in the best and strongest
 wine, and afterwards distilled in Balme Maize, being dranke,
 helpeth any paine in the sides, as hath beene certainly probed.
 Tragus the Germane consefeth, that with this onely water he
 bath cured all maner of paines about the stomacke, heart, or
 lides. Wine made of the Sloe, and preserued untill Julie, or
 August, when the bloudy flur most raigneth, is a soveraigne
 medicine against it. The other, the Hony-suckle, or the Wood-Woodbine.
 bine, it beginneth to flowre in June, and continueth with a pas-
 sing sweet sauour, till the very latter end of summer. The water
 thereof distilled and dranke, two or thre daies together at
 times, asswageth the heate of the stomacke, helpeth the Cough,
 and shortnes of breath. Rags of linnen dipp'd therein, and appli-
 ed, doe heale any heate of the Eyes, or Liver. Next unto my
 hives, I have planted the sweet hearbe Melissa, or Apiastrum, cal-
 led in English, Balme; with a square stalk, a leafe like a
 smooth Kettle, and a yellow flowre, & groweth almost in every
 hedge, an hearbe wel knowne to the old women in the Country,
 and greatly desired of the Bee. This Melissa, or Balme, sodden in
 white Wine, & dranke two or thre mornings together, purgeth
 the brest, helps the shrownd, comforteth the heart, driveth
 away the the dumpish heatnesse, that procedeth of Melancho-
 ly, helpeth the Falling-sicknesse, and almost all other diseases:
 being chopped small, & stoped a night in good white wine, and
 afterwards distilled, is greatly commended, not onely in deli-
 vering women from their pangs and grieses of the Mother,
 being dranke to the quantiti of thre or four Sponefulls, but
 also cureth the paines or fainting of the heart, called common-
 ly, The passion of the heart. Cardus greatly commendeth this
 hearbe, for the comforting and renning of a decayed memory: &
 affirmeth, that it is a causer offweet and pleasant sleepes. Next
 unto this have I growing that sweete and precious hearb An-
 gellica. This hearbe is in flowre, stem, leafe, stalk, & favour, so like
 unto Louage, as they may hardly be discerned the one from the
 other; the leafe doth in a manner resemble the fig leafe, swining
 that

that it is more lagged, and indeated round about. If any man
be suddenly infected with the pestilence, Fever, or immoderate
sweat, let him take of the root of this Angellica in powder, halfe
of Treacle, a drachm, and putting to it a dramme of Treacle, mingle them
together with thre or four sponefus of the water distilled of
the said roote; and after he hath drunke it let him lie ad sweat,
fasting so: the space of thre hours art the least: this doing, by
the helpe of God, he shall escape the danger: the roote steeped in
Vinegar, and sinelt unto, and the same Vinegar sometimes
drunke fasting, doth preserue a man from the pestilence: to be
short, the roote and the water thereof, is soueraigne against all in-
ward diseases, it scouzeth away the collections of a Pleurisie
beginning, helpeth Ulcered and corrupted Lungs, and is good
against the Collicke, Strangurie, and restraint of Womens
Purgations, and for any inward swelling, or inflammation: the
uyce thrust into a holloo tooth, asswageth the paine, the water
dropped into the eare, doth the like: the said uyne and water
put into the eye, quickeneth the sight, and taketh away the thin
skinnes and rines that covereth the eye. Besides, a most present
remedy in all sores and rotten sores, is the uyne, the water or
the powder: so: it cleaseth them, and covereth the hole with
good flesh. It was called in the old time Panacea, or Healeal. Next
unto this Angellica, have I growing in great plenty, Cardus

Cardus Benedictus. Benedictus, or blessed Thistle, which all Physitions do commend
for sundry and great vertues, affirming that it was first sent out
of India, to Frederick the Emperour, for the great vertue it had
against the Headach, or Megrime, being eaten or drunken.
Likewise, they say, it helpeth against the dazing, or giddiness
of the head, maketh a god memorie, and restoreth the hearing.
So: the profe of his great force against poysone, they bring forth
a young maiden of Pawy, that having unwares eaten of a poi-
soned Apple, and therewithall so swollen, as no Treacle, or
medicine could cure her, was at the last restored to health,
by the distilled water of this Thistle: and likewise that a
boy, into whose mouth as he slept in the field, happened an
Adder to creape, was saved by the drinking of this water,
the Adder creeping out behinde, without any hurt to the
childe. In fine they affirme, that the leaves, uyne, seede,
and

and water, healeth all kinde of poysons, and that the water hath healed a woman, whose brest was eaten with a Canker to the very ribbes. I have also set into this little peice of ground, great stoez of the hearbe called Namularia, or Penigrasse, which cree^r Penigrasse. peth close by the ground, having upon a long string little round leaves, standing directly one against the other, and a yellow flower, like the Croe-sowt. It is a soveraigne hearbe for healing of wounds, not onely outward and greene wounds, but also inward sores and vicles, specially of the Lungs, whereof there hath beeⁿ god proffe. Tragus affirmeth, that he hath seen dangerous and desperate wounds cured with this hearbe, being boyled with Honey and Wine, and dranke. It healeth ulcerations of the Breast and Lungs, and may be well given to those that Cough, and are shott breathed, and to little childzen diseased with the dry Cough, who by reason of their tender age may take no stronger medicine. I have sene god plentie of it growing by the shadowis of ditches, about great Peckham in Kent. I have beside there growing, Scabious, an hearbe that groweth commonly in Corne, with a tagged leafe, lying round upon the ground, and thrusting out in Summer a long stalk, with sundry branches, the flower growing in blew knobs, or tuftes, like hony Combes. This hearbe being sodden with Wine, and dranke, doth helpe the Pleurisie, against which diseases, the women of the countrey, that many times take upon them to be great Drestes in Phisiche, doe still the water thereof in May, and give it to be drunke at each time, two or thre sponefuls, not onely against the Pleurisie, but against inward impostumes, Coughes, and all diseases of the brest. Against impostumes, divers (as Tragus witteth) doe make this composition, they take a handfull of Scabious, the hearbe dried, of Liquerise cut small an ounce, twelve Figgies, Fenell seed an ounce, Anised as much, Dras halfe an ounce; These they lay a night in water: the next day they boile them, til a third part be consumed, and after making it sweet with Suger, or Honey of Roles, they give it warme in the Morning and Evening: wherewith they say, the impostume is ripened, made soft, and cougheⁿ out.

It is called of some Feucrarium, & Veronica, as it is supposed of Veronica.

A certaine French King who was thought by the iurye thereof, to be cured of a great Leprosie, it is called in English Filhellin : it crepeth low by the ground, as Penigrass doth, & beareth a lease like the Blacke-thorne with a blewish speckled flowre, with a sed inclosed in little pouches, like a shepheards purse, and growmeth commonly under Okes. D. Hieron wryteth, that the sores thereof, is marueilous against the Pestilence, and contagious ayres, and that he himselfe hath oftentimes proved. The water of the hearbe streped in white Wine and distilled, therewithall he hath cured sundry times, hot burning and pestilent feavers, as well in young men, as in olde. Hieron Transchweyg, commended it to be singular good for all diseases of the Spleene : the Shepheards of Germanie give it with great profit made in powder, and mingled with Salt, to their Cattell diseased with the Cough : beeing steeped in Wine and distilled, it is a most present remedie in all pestilent feavers : being given two ounces thereof with a little Treacle, and after laid warme in bed, and well covered, it expelleth the poison by sweat, and driveth it from the heart. The water of this hearbe taken certaine daies together, two ounces at a time, helpeth the turn-sick giddiness of the head, voideth cleane, purgeth bloud, warmeth the stomack, openeth h[er]stopping of the Liver, healeth the diseases of the Lungs, and Spleene, purgeth the Veines, the Matrice, and the Bladder, it driveth out sweat and venome, helpeth the Sandise, the stone of the Veines, and other grievous diseases.

Caripilitata. You shall also have amongst these plants of mine, the good sweet hearbe Cariphilata, or of some Benedicti : of others Sannanda, called in English Avene, whose roots whether it be greene, or olde, resembleth the Clove in labour : the lease is ragged, tough, of a darkish greene, and not much unlike to Agrimony : the flowre is yellow, and after the falling thereof, leaveth a prickly knoppe like a Hedge-hogge : the roote the longer it hath growen, the swarter it is : the speciall use of this roote in some countries, is to be put in Wine in the Spylng-time : for it maketh the Wine to taste and favour very pleasantly: whiche Wine, as many hold opinion, doth glad the heart, openeth the obstruction of the Liver, and healeth the Stomache

Stomache that is overburdened with cold and grosse humours :
 this roote boiled in Wine & given warme, doth cease the griesse
 of the stomache, or the belly, proceeding of either cold, or winde.
 Vnde by this hearbe, have I planted the great water Betony, Water Bea
 called of some Ocimastrum, of Mathiolus, Scrophularia Maior : tony.
 it hath a great square stalk, and big lease indented round about:
 the flowre is in colour Purple, and in fashion like the shell of a
 snaile; it flowreth in June and July, and groweth most by
 waters in shadowie places. Tragus teacheth to make a speciall
 oyntment therof, seruynge against all scabbes and sores, whereso
 with he saith, he hath seene people so mangy & they have seemed
 even Lepers, to be cured: his oyntment is this, take the hearbe,
 rates, and all, gathered in May, washed and well cleansed from
 all filth, stamp it, and straine out the iuyce, & keepe it in a nar
 row mouthed Glasse well stopped, wherein you may keepe it a
 whole yere, and whensoeuer you list to make your oyntment,
 take of the same iuyce, of Ware, and Oyle, of each a like quan
 tity, & boile them together upon a Chaldron of coales, stirring
 them well, till they be incorporated, and so use it. Mathiolus tea
 cheth to make a singular oyntment therof against Kernels, the
 Kings evil, and the Hemerodes: his order is this. You must ga
 ther the rates in the end of Summer, and after that you have
 made them very cleane, stamp them together with fresh Butter
 & putting them into an earthen vessell close covered, set them vp
 in some moist and dampish place, suffering it there to remayne
 for the space of fiftene dayes: afterwards, let the same Butter
 be melted with a hot fire, and being well strained, lay it up
 for your use. There have I also another excellent hearbe,
 called in Latine Cardiaca, I know no name for it in English,
 except you will call it Mother-wort: & indeed it is the very true
 Mother-wort; it groweth by high waies, and neare to stone wals,
 it hath a lease something like a Nettle, but more indented, the
 leaves next to the roote being iagged like the Crocata: it
 groweth bushing with many stalkes, I have seene it plentifully
 in Surry, and some stoe of it about Haidstone in Kent: it is of
 great force against any sicknesse of the heart, wherof it taketh
 his name: it helpeth Crampes, and Palsies, it cleanseth the
 breast from cleame, it killeth Wormes in the body, openeth
 obstructions,

Structions, provoketh waine, and Womens courses: being made in powder, and a sponefull of it given in Waine, it wonderfully helpeth the hard labours of Women.

Whoever is troubled with breaking of winde, and weake-nesse of stomacke, and those whose stomacks retaine not their meate, or whosoever feeleth soure belching from their stomacks, and is therewith often troubled, let them continually use Betony, either the hearbe or flowre boyled in Waine, or the water distilled, or the Conserue (as they call it) of the flowres. And if so be you lacke the Conserue, or the water, you may use the drye hearbe in powder, either by it selfe, or with hony: women that are troubled with the Mother, may use this hearbe for their remedie. To be short, the flowre, lease, and roote of Betony sodden and drunke, or howsoeuer you wil, in Electuarie, Conserue, Syrop, Potion, or Powder, as you list to take it, is singular good in the diseases of the Stomacke, Liver, Spleene, Kidneys, and Bladder, it fraeth the Patrice from obstruction, and draweth thence all hurtfull moistures. For consumptions of the Lungs, Coughes, Dropsychies, continuall and pattered Fevers, proceeding from the Stomacke, boyle the leaves and flowres of Betony in honied water, and you shall have present helpe. Thus have I shewed you what kinde of hearbes I have planted about my Bas, to the end they shoulde haue sode at hand of the sweetest, and the wholesomest: I haue shewed you also the vertues of the heache, the flowre, and the water, that you may use it for your owne commoditie: onely this warning I give you, that you doe not distill them, as the unskilfull doe, in Killes of Lead, Tinne, and Brass, which poisoneth and spoileth the water, but in Glasse Stills; set in some vessele of water upon the fire, whereby your water shal be most perfect and wholesome. The difference of these two distillings, appeareth plaine: for example in Wozmeadow, which if you distil in your common Stillatories the water cometh out sweet, having gotten a corrupt qualite by the nature and corruption of the Mettall: whereas, if you doe it in Stills made of Glasse, looking that the Glasses be well closed round about, your water shal haue the very taste, favour, & property

erty of the Hearbs. With these Glasse Potis you may so order
your fire, as you may draw out of every heareb, the Water,
Spicit, Oyle, and Salt, to the great comfort of sick and disea-
sed persons. I set besides great plenty of Savory, Heath, Ma-
mariske, and without the Bayard, Weyne, in whose floszes
the Hie much delighteth.

FINIS.

Soli Deo honor & gloria.

Olde English Rules, for purchasing Land.

*Who so will be wise in purchasing,
Let him consider these points following.*

First, see that the Land be cleare,
In title of the seller.
And that it stand in danger
Of no womans Dowrie.
See whether the Tenure be bond or free,
And release of every feoffee.
See that the seller be of age,
And that it lie not in morgage.
Whether a taile be thereofound,
And whether it stand in statute bound.
Consider what seruice longeth thereto,
And what quitrent thereout must goe.
And if it be come of a wedded woman,
Thinke thou then on covert baron.
And if thou may in any wise,
Make thy Charter with warrantise,
To thee, thine heires, assignes also,
Thus should a wise purchaser doe.

F I N I S.

